

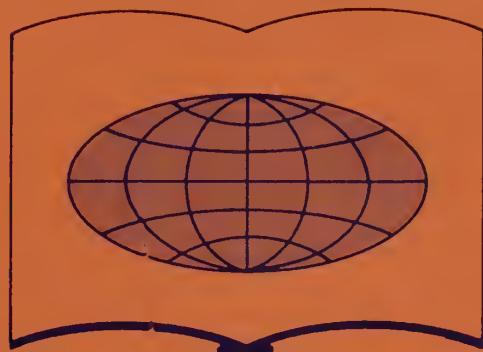
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# Pesticides DOCUMENTATION BULLETIN



Volume 5  
January 17, 1969

Number 2



*Use Pesticides Safely*  
FOLLOW THE LABEL

U.S. DEPARTMENT OF AGRICULTURE

# PESTICIDES DOCUMENTATION BULLETIN

A Bi-Weekly Publication of U.S. Department of Agriculture

Volume 5  
January 17, 1969  
Number 2

## OBJECTIVES AND SCOPE

The *Pesticides Documentation Bulletin* is compiled by the National Agricultural Library's Pesticides Information Center to facilitate national research efforts in all aspects of pest control. This bi-weekly index to the literature includes coverage of diseases, insects, nematodes, parasites, weeds and other pests affecting plants, animals, man, our natural resources and other values in man's environment. Special emphasis is given to the literature on toxicological, physiological and epidemiological aspects of pests and their control by chemical biological and integrated methods.

For broader coverage of literature on agriculture and related subjects, please consult the *Bibliography of Agriculture*, a monthly publication of the National Agricultural Library.

## FORMAT

The *Bulletin* is a categorized bibliography, with citations arranged alphabetically by author under the following major subjects:

- 10 Entomology
- 20 Crop Protection
- 30 Livestock Protection
- 40 Commodity Protection
- 50 Environmental Contamination
- 55 Residues
- 60 Toxicology
- 65 Plant Physiology & Biochemistry
- 70 Chemistry
- 80 Engineering
- 90 Industry

**Citations:** Each citation consists of an accession number assigned serially with the last two digits representing the Bulletin's issue year, i.e. 3286-67. The citation number (minus the year) is used in all indices. Following the accession number is the full title of the article; all personal authors; an abbreviated journal title; volume, issue and inclusive page numbers; date of publication; language abbreviation, if other than English; and the National Agricultural Library's call number. Subject descriptors, patent or grant numbers, bibliographer's notes, and abstracts or extracts may follow each citation when appropriate.

**Subject Index:** Subject descriptors appear in the index followed by title arranged numerically by accession number. The Agricultural/Biological Vocabulary developed by the National Agricultural Library is used as a basic thesaurus of descriptors.

**Biographical Index:** Names of first authors are arranged alphabetically, followed by organizational affiliation and accession number.

**Author Index:** Names of personal authors are arranged alphabetically, followed by accession numbers of pertinent citations.

**Organizational Index:** Names of corporate authors or sponsoring organizations are arranged alphabetically followed by accession numbers of pertinent citations.

## Other Files

In addition to the citations contained in the Bulletin, the Pesticides Information Center maintains two other files, the INTREDIS Register and the Herbicides Data File.

The INTREDIS Register is a computer data bank in the field of forest pathology. It contains title and author references to abstracted articles including subject, country, host plant genus or species, organisms causing the diseases, abstracting journal and year of publication. The computer search uses boolean parameters in any combination of elements listed.

The Herbicides Data File consists of reports on field tests conducted by the Crops Protection Research Branch, Crop Research Division, Agriculture Research Service. Each test record contains the following items of information:

- Compound Tested
- Company furnishing the compound
- Author or Investigator
- Test Sponsor
- Date
- Location
- Mode of Application
- Rates of Application
- Soil Types
- Carriers
- Crops or Weeds tested with phytotoxicity ratings
- Associated documentation

Note: Items subject to proprietary restriction will be suppressed when appropriate.

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Each item appearing on magnetic tapes in the Pesticides Information Center is fully searchable on the computer. Questions submitted to the Center should fully describe all parameters of the desired information in narrative form.

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National Agricultural Library  
PESTICIDES INFORMATION CENTER  
Beltsville, Maryland 20705

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## ACKNOWLEDGMENT

The Pesticides Information Center, National Agricultural Library, gratefully acknowledges the cooperation and assistance of the Department of Defense; Health, Education, and Welfare; and Interior; the Federal Committee on Pest Control, and state and industrial organizations in the development of the Center and preparation of this Bulletin. Special thanks are expressed to the Federal Committee on Pest Control for its suggestions and support. We hope the Bulletin will serve as an example of the effectiveness of interdepartmental cooperation and the speed with which effective services can be developed through a coordinated and cooperative interdepartmental effort.

Use of funds for printing this publication approved by the Director of the Bureau of the Budget (May 23, 1968).

**PLEASE GIVE COMPLETE BIBLIOGRAPHIC INFORMATION AS IT APPEARS IN THIS PUBLICATION FOR EACH ITEM REQUESTED.**

This publication reports research involving pesticides. It does not contain recommendations for their use, nor does it imply that the uses discussed here have been registered. All uses of pesticides must be registered by appropriate State and/or Federal agencies before they can be recommended.

**CAUTION:** Pesticides can be injurious to humans, domestic animals, desirable plants, and fish or other wildlife—if they are not handled or applied properly. Use all pesticides selectively and carefully. Follow recommended practices for the disposal of surplus pesticides and pesticide containers.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402. \$32.00 per year, domestic; \$40.00 per year, foreign. Single copies vary in price.

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\*This issue does not contain citations under this category.

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## BIBLIOGRAPHY

### ENTOMOLOGY

580-69

RESEARCH ON THE FAUNA OF THE SARNO RIVER. I. DESCRIPTION OF THE COURSE OF THE WATER AND POPULATION DATA ON THE INVERTEBRATES IN THE SOURCE AND UPPER STREAM. (IT)

P Battaglini A Pierantoni G Peruoco

Naples Soc Natur Boll 76(PT 2):695-711

1967 410.9 N16

Animal ecology, Aquatic animals, Aquatic insects, Invertebrates, Population, Precipitation, Water analysis. English summary.

581-69

AN UNUSUAL INSTANCE OF PHORESY IN ACARINA.

D A Chant

Entomol News (Philadelphia) 71(10):270-271

Dec 1960 421 EN88

Culture media, Feeding, Hylemya brassicae, Insect control, Macrocheles mardarius, Phoresy, Research.

582-69

SPIDERS AND THEIR INSECT PREY FROM HEADS OF OX-EYE DAISY, CHRYSANTHEMUM LEUCANTHEMUM L., IN SOUTHWESTERN ONTARIO.

W W Judd

Entomol Soc Ontario Proc 95:137-139

1964 420 ON8

Chrysanthemum, Insect behavior, Insect names, Predaceous insects, Research, Spiders.

583-69

THE EFFECTIVENESS OF APHELINIDE, PROSPALTELLA PERNICIOSI TOWER IN THE SAN JOSE SCALE, QUADRASPIDIOTUS PERNICIOSUS (COMSTOCK), INFESTED AREA OF SOUTHWESTERN GERMANY.

G Neuffer

Anz Schadlingskunde 41(7):97-101

Jul 1968 421 AN9

Apples, Aspidotus perniciosus, Breeding, Geography, Parasitic insects, Prospaltella perniciosi, Research. English and French summary

584-69

CONTROL OF EXOTELEIA DODECELLA L.

Z Sierpinski

Anz Schadlingskunde 41(7):106-107

Jul 1968 421 AN9

Air pollution, Exoteleia dodecella, Fumes, Insecticides, Research, Spraying equipment.

585-69

BEAUTY VS. UTILITY IN MOUNTING SMALL FLIES ON PAPER POINTS.

G C Steyskal

Entomol Soc Wash Proc 70(3):286

Sep 1968 420 W27

Adhesives, Diptera, Entomology, Labeling, Mounting.

### SYSTEMATICS

586-69

A NEW GENUS (NEOSTEREOPALPUS) OF THE EURYGENIINI (COLEOPTERA: ANTHICIDAE) FROM JAPAN.

M Abdullah

Pakistan J Sci Indus Res 10(4):265-267

Oct 1967 475 P174

Anthicidae, Insect taxonomy, Neostereopalpus niponicus, Zoogeography.

587-69

A THIRD SPECIES OF STEREOPALPUS (COLEOPTERA: ANTHICIDAE: EUREYGENIINAE) FROM CHINA.

M Abdullah

Pakistan J Sci Indus Res 10(4):270-271

Oct 1967 475 P174

Anthicidae, Coleoptera, Insect taxonomy, Stereopalpus asiaticus.

588-69

THE FOODPLANT OF IDIOCERUS VARIUS GERM. (HEM., CICADELLIDAE).

A A Allen

Entomol Mon Mag (SER.4)99(287-8):233

Nov 1963 421 EN86

Food plants, Idiocerus varius, Insect identification, Insect rearing, Research.

589-69

OPSIUS STATOGALUS FIEB. (HEM., CICADELLIDAE) IN AND NEAR LONDON: A SECOND NOTE.

A A Allen

Entomol Mon Mag (SER.4)99(287-8):240

Nov 1963 421 EN86

Food plants, Insect identification, Opsius statogalus, Research.

590-69

DERMESTES PERUVIANUS LAP. (COL., DERMESTIDAE): A CORRECTION.

A A Allen

Entomol Mon Mag (SER.4)99(287-8):229

Nov 1963 421 EN86

Cuticle, Dermestes peruvianus, Insect identification, Insect migration, Research.

591-69

SYSTEMATIC AND FAUNISTIC DESCRIPTION OF THE COCKCHAFER MELOLONTA MELOLONTA (VULGARIS F.) IN SWITZERLAND. (GE)

V Allenspach

Entomol Gesell Basel 17(2):29-36 REF

Jun 1967 QL461.E58

Insect taxonomy, Melolontha melolontha, Zoogeography. Several sub-species are also described.

592-69

RECORDS AND DESCRIPTIONS OF AFRICAN ENCYRTIDAE-4 (HYMENOPTERA: CHALCIDIODEA).

D P Annecke

Entomol Soc Southern Afr J 31(2):249-264

Sep 1968 420 EN86

Catalogs, Encyrtidae, Insect taxonomy, Parasitism, Zoogeography.

593-69

NOTES ON THE GENUS ONCOPSIS BURMEISTER, 1838 (HOMOPTERA, AUCHENORHYNCHINA) WITH DESCRIPTIONS OF NEW SPECIES FROM THE SOVIET FAR EAST.

G A Anufriev

Entomol Tidskr 88(3-4):174-184

31 Dec 1967 421 EN891

Catalogs, Homoptera, Insect taxonomy.

594-69

NOTES ON TWO COENONYMPHA OF THE PARIS BASIN. (LEPIDOPTERA: NYMPHALIDAE SATYRINAE). (FR.)

G Bernardi

Alexanor 5(1):39-40

13 Apr 1967 421 AL2

Insect taxonomy, Nymphalidae, Zoogeography.

595-69

IDENTIFICATION OF CUTWORMS OF ECONOMIC IMPORTANCE ON RHODESIA (LEPIDOPTERA: NOCTUIDAE).

B W Blair

Entomol Soc Southern Afr J 31(1):113-114

Mar 1968 420 EN86

Insect taxonomy, Noctuidae.

596-69

CARABUS (PROCRUSTES) MULSANTIANUS MOR. N. NURDAGENSIS NOV. (GE)

C L Blumenthal

Entomol Bl 63(2):121-122 MAP

15 Oct 1967 421 EN833

Carabidae, Insect taxonomy, Zoogeography.

597-69

DARKLING BEETLES OF THE GENUS EPITRICHIA GEBLER (COLEOPTERA, TENEBRIONIDAE).

A V Bogachev

Entomol Rev 46(2,APR-JUN):208-210

Jun 1967 421 R322AE

Catalogs, Insect taxonomy, Tenebrionidae, Zoogeography.

598-69

NEW HOPLISOIDES FROM THE UNITED STATES (HYMENOPTERA: SPHECIDAE).

R M Bohart

Entomol Soc Wash Proc 70(3):287-292

Sep 1968 420 W27

Hoplisoides, Hymenoptera, Sphecidae, Taxonomy.

599-69

LIST OF THE NOCTURNAL TRIFIDS OF FRANCE AND BELGIUM. (FR)

C Boursin

Alexanor 5(1):41-48

13 Apr 1967 421 AL2

Noctuidae, Zoogeography. Continuation and to be continued. listing of no. 168-265.

600-69

THE DERMAPTERA OF VENEZUELA.

A Brindle

Acta Biol Venezuelica 6(1):82-98

31 Mar 1968 475 AC86

Catalogs, Dermaptera, Insect taxonomy, Zoogeography.

601-69

A NEW AFRICAN MEMBRACID (HEM. HOM.).

A L Capener

Entomol Tidskr 88(3-4):185-187

31 Dec 1967 421 EN891

Insect taxonomy, Membracidae.

602-69

NEW MEMBRACIDAE (HEMIPTERA: HOMOPTERA) FROM SUDAN AND ETHIOPIA.

AI Capener

Entomol Soc Southern Afr J 31(2):323-336

Sep 1968 420 EN86

Catalogs, Insect taxonomy, Membracidae.

603-69

BIBLIOGRAPHY ON THE SYSTEMATIQUE OF ENTOMOPHAGOUS INSECTS. V. (FR)

Entomophaga 7(1):69-76

1962 421 EN835

Bibliography, Coleoptera, Diptera, Hymenoptera, Insect taxonomy, Parasitism, Predaceous insects.

604-69

NOTES ON THE FAUNA OF THE ARNORIQUE MOUNTAINS. (FR)

J Cherel

Alexanor 5(1):33-37

13 Apr 1967 421 AL2

Insect collection, Insect taxonomy, Lepidoptera, Zoogeography. Listing of more than 100 species.

605-69

THE GENUS ISCHNOOTHYREUS (ARANAEAE, OONOPIDAE) IN CENTRAL AMERICA AND THE WEST INDIES.

A M Chickering

Psyche 75(1):77-86

Mar 1968 421 P95

Ischnothyreus, Spiders, Taxonomy, Zoogeography.

606-69

THE DISCOVERY OF A NEW DAMASTER FROM FORMOSA (COLEOPTERA, CARABIDAE).

Y Chu

Mushi 41(3):59-62 REF

10 Aug 1967 421 M97

Carabidae, Insect taxonomy, Zoogeography.

607-69

A MELANISTIC FORM OF PARASEMIA PLANTAGINIS L. (GE)

# ENTOMOLOGY

608-69

K H Cleve  
*Deut Entomol Ges Mitt* 26(5):81-85

31 Dec 1967 420 D482

Breeding, Color, Entomology, Insect identification, Insect taxonomy, Melanosis, Parasemia plantaginis.

608-69

WATER NITES OF THE GENUS STYGMOMONIA IN NORTH AMERICA (ACARINA: MOMONIIDAE).

D R Cook

*Entomol Soc Wash Proc* 70(3):210-224

Sep 1968 420 W27

Acarina, Stygomonia, Zoogeography.

609-69

HOVERFLIES AND A BUG FROM CAERNARVONSHIRE.

R Crossley

*Entomologist (london)* 101(1259):79

Apr 1968 421 EN8

Insect identification, Syrphidae.

610-69

SOME NOTES ON THE SYRPHIDAE (DIP-TERA) OF A YORKSHIRE CLOUGH.

R R Crossley

*Entomologist (london)* 100(1246):73-74

Mar 1967 421 EN8

Habitats, Surveys, Syrphidae.

611-69

THE CHROMOSOMES OF THREE AUSTRALIAN DACETINE ANT SPECIES (HYMENOPTERA: FORMICIDAE).

R H Crozier

*Psyche* 75(1):87-90

Mar 1968 421 P95

Chromosomes, Dacetini, Formicidae, Hymenoptera, Insect taxonomy. Chromosome studies support present taxonomic placement.

612-69

THE LARVAE OF SOME BRITISH NOTIOPHILUS SPECIES (COL., CARABIDAE).

M Davies

*Entomol Mon Mag (SER.4)*99(287-8):206-209

Nov 1963 421 EN86

Hibernation, Insect identification, Insect rearing, Larvae, Notiophilus, Reproduction, Research.

613-69

SECOND CONTRIBUTION TO THE KNOWLEDGE OF THE AFRICAN COCCOIDEA (HOMOPTERA).

G De Lotto

*Entomol Soc Southern Afr J* 31(1):83-86

Mar 1968 420 EN86

Coccoidea, Insect taxonomy.

614-69

SPINULANA, NEW GENUS OF MEXICAN DELTOCEPHALINAE, AND TWO NEW SPECIES OF SPINULANA. (HOMOPTERA: CICADELLIDAE).

D M Delong

*Ohio J Sci* 67(1):20-22

Jan 1967 410 OH3

Deltocephalinae, Insect identification, Insect morphology, Insect taxonomy, Spinulana.

615-69

STUDIES ON THE GYPONINAE; TWO NEW GENERA, CHILENANA AND CHILELLA. (HOMOPTERA: CICADELLIDAE).

D M Delong P H Freytag

*Ohio J Sci* 67(2):105-112

Mar 1967 410 OH3

Chilella, Chilenana, Entomology, Gyponinae, Insect identification, Insect taxonomy, Research.

Two new genera of Gyponinae, Chilenana and Chilella are described, both from Chile. Seven species, all new, C. similara, C. diverta, C. exilis, C. chilena, C. proxima, C. singularis, and C. flexa are described and placed in Chilenana. one species, C. rugella, is described and is the genotype of Chilella.

# BIBLIOGRAPHY

616-69

A NEW SPECIES OF DRAEUCULACEPHALA (HOMOPTERA-CICADELLIDAE) FROM CHILE.

D M Delong

*Ohio J Sci* 67(3):184-185

May 1967 410 OH3

Draeuculacephala chilensis, Entomology, Insect identification, Insect taxonomy.

617-69

DEVOLANA, NEW GENUS OF MEXICAN DELTOCEPHALINAE, AND A NEW SPECIES OF DEVOLANA. (HOMOPTERA: CICADELLIDAE).

D M Delong

*Ohio J Sci* 67(1):22-23

Jan 1967 410 OH3

Deltocephalinae, Devolana, Devolana hemicycla, Insect identification, Insect taxonomy.

618-69

CONTRIBUTIONS TO THE STUDY OF PHASINAE CIMICOPHAGES (DIPTERA TACHINIDAE). 35. TAXONOMIC AND BIOLOGICAL STUDIES OF CLAIRVILLIA BIGUTTATA AND THE RELATED EUROPEAN LEUCOSTOMATINA. (FR.)

C Dupuis

*Cah Natur* 24(1):1-43 REF

1968 410 F432

Clairvillia biguttata, Entomology, Insect identification, Insect taxonomy, Leucostomatina, Research, Tachinidae.

619-69

ORTHOTYLUS TENELLUS (FALL.) (HEM., MIRIDAE) IN EAST KENT.

J C Felton

*Entomol Mon Mag (SER.4)*99(287-8):240

Nov 1963 421 EN86

Insect taxonomy, Orthotylus tenellus, Research.

620-69

REDESCRIPTION OF SOME OPIINAE (HYMENOPTERA, BRACONIDAE). (GE)

M Fischer

*Arbeitsgemeinsch Osterr Entomol Z* 19(2/3):59-69

1967 421 W633

Braconidae, Insect taxonomy, Opiinae. 8 species are re-described.

621-69

STREPSIPTERA FROM THE SMITHSONIAN INSTITUTION'S SURVEY OF DOMINICA, WITH DESCRIPTION OF A NEW SPECIES OF ELENCHIDAE.

J W Fox

*Entomol Soc Wash Proc* 70(3):238-242 REF

Sep 1968 420 W27

Elenchidae, Insect identification, Strepsiptera, Surveys, Taxonomy.

622-69

NEW SPECIES AND RECORDS OF HESPERIIDAE FROM MEXICO (LEPIDOPTERA).

H A Freeman

*N Y Entomol Soc J* 76(4):267-277

Dec 1968 420 N48J

Hesperiidae, Insect taxonomy, Zoogeography.

623-69

A NEW PINE BARK BEETLE IN GERMANY, GNATHOTRICHUS MATERIARIUS FITCH. (GE)

R Gauss

*Z Angew Entomol* 61(4):454-456

May 1968 421 Z36

Gnathotrichus materiarius, Insect identification, Pinus, Zoogeography.

624-69

NOTE ON TWO TYPE SPECIMENS OF BRITISH PTEROMALIDAE (HYM., CHALCIDOIDEA) IN THE G. T. RUDD COLLECTION (YORKSHIRE MUSEUM, YORK).

M W R de V Graham

*Entomologist (london)* 100(1246):77-78

Mar 1967 421 EN8

Insect taxonomy, Pteromalidae.

625-69

CORRELATIONS BETWEEN CHARACTERS IN SPECIES OF COLIAS (LEPIDOPTERA: PIERIDAE).

P H H Gray

*Entomologist (london)* 100(1246):62-63

Mar 1967 421 EN8

Colias, Insect morphology, Insect taxonomy, Wings (insects).

626-69

A NEW CLICK BEETLE OF THE GENUS AGRIOTES ESCH. (COLEOPTERA, ELATERIDAE) FROM SOVIET CENTRAL ASIA.

Ye L Gur'yeva

*Entomol Rev 46(1 JAN-MAR)*:121-122

Mar 1967 421 R322AE

Elateridae, Insect taxonomy, Zoogeography.

627-69

THE BIBIONIDAE (DIPTERA) OF NEPAL, RESULTS OF THE AUSTRIAN AND THE B. P. BISHOP MUSEUM EXPEDITIONS, 1961 AND 1965.

D E Hardy

*Pacific Insects* 9(3):519-536

20 Aug 1967 421 P11

Bibionidae, Catalogs, Insect taxonomy.

628-69

AN AUTOMATIC DEVICE FOR DIVIDING AND PACKAGING LIGHT TRAP INSECT CATCHES ACCORDING TO TIME INTERVALS.

A W Hartstack J P Hollingsworth

*U S Agr Res Serv ARS* 42-146:3-14

Sep 1968 A58.9 R31

Attractants, Automatic control, Equipment, Insects, Light traps, Research.

629-69

NOTES ON HELCONINI (ICHNEUMONOIDEA, BRACONIDAE, HELCONINAE). PART I.

K J Hedquist

*Entomol Tidskr* 88(3-4):133-143

31 Dec 1967 421 EN891

Braconidae, Catalogs, Hymenoptera, Insect taxonomy, Zoogeography.

630-69

HERCOSTOMUS PRAECEPS LW.--H. FULVICAUDIS WALK. (DIPT., DOLICHOPODIDAE), A CORRECTION.

L Hedstrom

*Entomol Tidskr* 88(3-4):146

31 Dec 1967 421 EN891

Dolichopodidae, Insect taxonomy.

631-69

NEW SPECIES OF ERYTHRONEURA RELATED TO ERYTHRONEURA DIRA (HOMOPTERA: CICADELLIDAE).

L W Heppner

*Kans Entomol Soc J* 40(1):17-24

Jan 1967 420 K13

Erythroneura, Insect identification, Insect names, Research, Taxonomy.

632-69

ON THE ORTHOPTEROUS FAUNA IN THE SOUTH OF THE KRASNOYARSK TERRITORY.

I V Ivanova

*Entomol Rev 46(1 JAN-MAR)*:72-80 REF

Mar 1967 421 R322AE

Economic entomology, Orthoptera, Surveys, Zoogeography.

633-69

AN ADVENTIVE ANTHIDIUM IN NEW YORK STATE (HYMENOPTERA: MEGACHILIDAE).

E R Jaycox

*Kans Entomol Soc J* 40(1):124-126

Jan 1967 420 K13

Anatomy, Anthidium, Cuticle, Insect identification, Insect rearing, Insect traps, Research.  
634-69  
A NEW SPECIES OF NOTIOPHYGUS GORY WITH SUPPLEMENTARY INFORMATION (DISCOLOMIDAE COL.). (GE )  
H John  
*S Afr Mus Ann* 50(8):163-168  
Dec 1967 515 S082  
Discolomidae, Insect taxonomy, Notiophygus. English summary. Five new species were: *N. acutus*, *N. fungivorus*, *N. tritus*, *N. globulus* and *N. inops*.

635-69  
CONCLUSION OF A REVISION OF APHAENOCEPHALUS (COLEOPTERA, DISCOLOMIDAE). (GE )  
H John  
*Leiden Rijksmus Natuur Hist Zool Mededel* 42(3):11-15  
08 Mar 1967 410.9 L59  
Aphanocephalus, Discolomidae, Insect taxonomy, Zoogeography. Six other species are discussed.

636-69  
SOME NEW SYNONYMY IN THE PTILIIDAE (COL.).  
C Johnson  
*Entomologist (london)* 101(1259):76-79  
Apr 1968 421 EN8  
Coleoptera, Insect taxonomy.

637-69  
CRYPTOPLERUM SUBILE SHARP (COL., HYDROPHILIDAE): AN EXPECTED ADDITION TO THE BRITISH LIST.  
C Johnson  
*Entomologist (london)* 100(1250):172-173  
Jul 1967 421 EN8  
Hydrophilidae, Insect taxonomy.

638-69  
FLEAS OF THE MOLE TALPA EUROPAEA L. IN CZECHOSLOVAKIA (APHANIPTERA).  
M Jurik  
*Acta Ent Bohemoslov* 1(65):67-75  
1968 420 C33  
Insect ecology, Moles, Parasitic insects, Quantitative analysis, Research, Siphonaptera, Surveys, Temperature, Weather, Zoogeography.

639-69  
GAMPSOCLEIS GLABRA (HERBST) AND HOMOROCORYPHUS NITIDULUS (SCOPOLI), TWO FAUNISTICALLY NOTEWORTHY GRASSHOPPERS IN THE FISCHA-WIESE NATURE PRESERVE NEAR GRAMATNEUSIEDEL, LOWER AUSTRIA. (ORTHOPTEROIDEA, SALTATORIA). (GE )  
A Kaltenbach  
*Arbeitsgemeinsch Osterr Entomol Z* 19(2/3):35-37  
REF  
1967 421 W633  
Gampsocleis glabra, Homorocoryphus nitidulus, Orthoptera, Zoogeography.

640-69  
PARATEPHRITIS TRANSITORIA RHOD. (DIP-TERA, TEPHRITIDAE), A FLY THAT FORMS GALLS ON TASSEL FLOWERS IN THE MARITIME TERRITORY.  
M N Kandybina O V Kovalev V A Rikhter  
*Entomol Rev* 46(1, JAN-MAR):63-65 REF  
Mar 1967 421 R322AE  
Compositae, Gall-making insects, Insect taxonomy, Surveys, Tephritidae.

641-69  
NOTEWORTHY NEW FINDS OF LEPIDOPTERA FAUNA IN LOWER AUSTRIA, IV. (GE )  
F Kasy  
*Arbeitsgemeinsch Osterr Entomol Z* 19(2/3):38-42  
1967 421 W633  
Lepidoptera.

642-69  
REVISION OF THE NORTH AMERICAN SPECIES OF SLATEROCORIS (HETEROPTERA: MIRIDAE).  
L A Kelton  
*Can Entomol* 100(11):1121-1137 REF  
Nov 1968 421 C16  
Heteroptera, Miridae, Slaterocoris. Taxonomy.

643-69  
NEST ARCHITECTURE AND ASSOCIATED BEHAVIOR OF THE NOCTURNAL BEE, SPHECODOGASTRA TEXANA (HYMENOPTERA: HALICTIDAE).  
W B Kerfoot  
*Kans Entomol Soc J* 40(1):84  
Jan 1967 420 K13  
Habits, Insect behavior, Nesting, Pollination, Research, Sphecodogastra texana.

644-69  
A NEW SOUTH AMERICAN HAWK MOTH PROTOPARCE FERONIA SP. N. (LEP. SPHINGIDAE). (GE )  
K Kernbach  
*Deut Entomol Ges Mitt* 27(1):5-6  
15 Mar 1968 420 D482  
Entomology, Insect identification, Insect taxonomy, Moths, Protoparce feronia, Sphingidae.

645-69  
SITONA BREVIROSTRIS SOLARI (COL., CURCULIONIDAE) NEW TO THE BRITISH LIST.  
D K Kevan  
*Entomol Mon Mag (SER 4)* 99(277-9, JAN-MAR):39-41  
1963 421 EN86  
Anatomy, Insect identification, Research, Sitona brevirostris.

646-69  
A NEW GENUS OF BRUCHIDAE FROM SOUTH AMERICA, WITH THE DESCRIPTION OF A NEW SPECIES (COLEOPTERA).  
J M Kingsolver  
*Entomol Soc Wash Proc* 70(3):280-286 REF  
Sep 1968 420 W27  
Bruchidae, Coleoptera, Insect identification, Taxonomy.

647-69  
A REVISION OF THE TERMITOPHILOUS TRIBE TERMITODISCINI (COLEOPTERA: STAPHYLINIDAE). PART I. THE GENUS TERMITODISCUS NASMANN; ITS SYSTEMATICS, PHYLOGENY, AND BEHAVIOR.  
D H Kistner  
*N Y Entomol Soc J* 75(4):204-235 MAP  
Dec 1967 420 N48J  
Insect behavior, Staphylinidae, Zoogeography.

648-69  
REVISION OF THE TERMITOPHILOUS SUB-FAMILY TRICHOPSENIINAE (COLEOPTERA, STAPHYLINIDAE). I. THE GENUS SCHIZELYTHON KEMNER.  
D H Kistner  
*Entomol News (Philadelphia)* 80(2):44-53  
Feb 1969 421 EN88  
Catalogs, Insect behavior, Insect evolution, Insect taxonomy, Staphylinidae.

649-69  
POLISH SPECIES OF THE FAMILY TRIOZIDAE (HOMOPTERA, PSYLLODEA). (GE )  
S M Klimaszewski  
*Pol Akad Nauk Inst Zool Ann Zool* 25(3):227-315 REF  
31 Aug 1967 410.9 W26  
Host plants, Insect morphology, Insect taxonomy, Larvae, Psylidae. Polish and Russian summary. Description of more than 100 species.

650-69  
REVIEW OF THE PARASITIC DIPTERA OF THE GENUS ERIOTHRIX MEIGEN (DIPTERA, TACHINIDAE) IN THE USSR.  
3

N G Kolomiyets  
*Entomol Rev* 46(1, JAN-MAR):142-151  
Mar 1967 421 R322AE  
Catalogs, Insect taxonomy, Parasitic insects, Tachinidae, Zoogeography.

651-69  
A NEW SPECIES OF THE GENUS MACROCEPHALUS SWEDERUS FROM MEXICO (HEMIPTERA: PHYMATIDAE).  
N A Kormilev  
*Entomol Soc Wash Proc* 70(3):242-245  
Sep 1968 420 W27  
Hemiptera, Macrocephalus, Taxonomy.

652-69  
MYSMENA JOBI N. SP., A SYMPHYTOGNATHIDE IN MIDDLE EUROPE (ARACHNIDA, ARANAE, SYMPHYTOGNATHIDAE). (GE )  
O Kraus  
*Sencken Biol* 48(5-6):387-399  
22 Dec 1967 410.9 SE5  
Insect morphology, Insect taxonomy, Spiders, Zoogeography. French abstract.

653-69  
ENTOMOLOGICAL TOUR OF SPAIN. (FR )  
E de Lajonquiere  
*Alexanor* 5(1):25-32  
13 Apr 1967 421 AL2  
Insect collection, Insect taxonomy, Lasiocampidae, Lymantidae, Noctuidae, Notodontidae, Rhopalocera, Sphingidae, Zoogeography. Many sub species are mentioned.

654-69  
TINGIDAE FROM KOREA (HETEROPTERA).  
C E Lee  
*Mushi* 41(7):91-111 REF  
15 Sep 1967 421 M97  
Catalogs, Insect taxonomy, Surveys, Tingidae, Zoogeography.

655-69  
TWO NEW SPECIES OF GIGANTOLAELOPS (ACARINA: LAELAPTIDAE) WITH A KEY TO THE FEMALES.  
D Lee R W Strandtmann  
*Kans Entomol Soc J* 40(1):25-32  
Jan 1967 420 K13  
Anatomy, Food plants, Gigantolaelaps, Insect identification, Research, Taxonomy.

656-69  
ON SWALFLIES SYNONYMS (HYMENOPTERA, SYMPHYTA). (GE )  
E Lindqvist  
*Notulae Entomol* 47(4):117-126  
1967 421 N84  
Catalogs, Insect taxonomy, Symphyta.

657-69  
THE SPECIES OF THE PRISTIPHORA ABIETINA CHRIST GROUP (HYMENOPTERA, TENTHREDINIDAE). (GE )  
E Lindqvist  
*Notulae Entomol* 48(3):137-142  
1968 421 N84  
Catalogs, Insect taxonomy, Pristiphora.

658-69  
NEW PSYLLIDS (HOMOPTERA, PSYLLOIDEA) FROM THE FAR EAST OF THE USSR.  
M M Loginova  
*Entomol Rev* 46(2, APR-JUN):202-207  
Jun 1967 421 R322AE  
Catalogs, Insect taxonomy, Psyllidae, Zoogeography.

659-69  
NOTES ON TWO SPECIES OF MACHIMUS LW. IN NORTHERN EUROPE (DIPTERA, ASILIDAE).  
L Lyneborg  
*Notulae Entomol* 48(3):131-135 REF  
1968 421 N84  
Asilidae, Insect geography, Insect taxonomy.

660-69  
A NEW SPECIES OF CALOSOMA (CALISTHENES) FROM THE MIDDLE EAST. (GE)  
K Mandl  
*Arbeitsgemeinsch Osterr Entomol Z* 19(2/3):47-49  
1967 421 W633  
Calosoma, Insect taxonomy.

661-69  
A NEW SPECIES OF ALYSIA PARASITIC ON CARRION-FEEDING FLIES (HYMENOPTERA: BRACONIDAE).  
P M Marsh  
*Entomol Soc Wash Proc* 70(3):208-210  
Sep 1968 420 W27  
Alysia cariosa, Braconidae, Hymenoptera, Insect behavior, Parasitism, Taxonomy.

662-69  
HEMIPTERA OF THE STATE PRESERVE OF WESTHOEK. PENTATOMOIDEA. (FR)  
R Mayne  
*Bestu Waters Bossen Min Agr Serv Res Nat Dom Con Nat* (1):47P REF  
1965 HC311.A1B4  
Hemiptera, Insect ecology, Insect identification, Insect taxonomy, Pentatomidae, Zoogeography.

663-69  
SWARMING OF LONCHAEID FLIES AND OTHER INSECTS, WITH DESCRIPTIONS OF FOUR NEW SPECIES OF LONCHAEIDAE (DIPTERA).  
J F McAlpine D D Munroe  
*Can Entomol* 100(11):1154-1178 REF  
Nov 1968 421 C16  
Diptera, Insect behavior, Insect identification, Lonchaeidae, Swarming, Taxonomy.

664-69  
A PRELIMINARY LIST OF TACHINIDAE (DIPTERA) FROM JAPAN.  
L P Mesnil H Pschorn-Walcher  
*Mushi* 41(12):149-174  
30 Jan 1968 421 M97  
Catalogs, Surveys, Tachinidae, Zoogeography.

665-69  
TIMARCHA TENEBRICOSA (FARBER) (COLEOPTERA: CHRYSOMELIDAE) AT MARTIN'S HAVEN, PEMBROKESHIRE.  
M L Mills  
*Entomologist (London)* 100(1250):171  
Jul 1967 421 EN8  
Chrysomelidae, Festuca ovina, Habitats, Holcus.

666-69  
DESCRIPTIONS OF TWO NEW SPECIES OF THE GENUS STETHORUS WEISE FROM JAPAN (COLEOPTERA: COCCINELLIDAE).  
M Miyatake  
*Shikoku Entomol Soc Trans* 9(2):51-54  
Sep 1966 420 SH6  
Anatomy, Coccinellidae, Insect identification, Insect taxonomy, Research, Stethorus.

667-69  
A NEW GENUS BELONGING TO THE TRIBE PHARINI FROM THE NORTHERN PART OF THE RYUKYU ISLANDS (COLEOPTERA: COCCINELLIDAE).  
M Miyatake  
*Shikoku Entomol Soc Trans* 9(2):47-50  
Sep 1966 420 SH6  
Anatomy, Coccinellidae, Color, Insect identification, Insect taxonomy, Nesolotis, Research.

668-69  
ICHNEUMONIDAE (HYMENOPTERA) COLLECTED IN PADDY FIELDS OF THE ORIENT, WITH DESCRIPTIONS OF NEW SPECIES. PART 3. SUBFAMILIES OPHIONINAE, CREMASTINAE AND ICHNEUMONINAE.  
S Momoi  
*Mushi* 41(17):215-220  
28 Mar 1968 421 M97  
Catalogs, Ichneumonidae, Insect taxonomy, Rice, Surveys, Zoogeography.

669-69  
A KEY TO ICHNEUMONID PARASITES OF RICE STEM BORERS IN ASIA (HYMENOPTERA: ICHNEUMONIDAE).  
S Momoi  
*Mushi* 41(13):175-184  
28 Mar 1968 421 M97  
Catalogs, Chilo suppressalis, Ichneumonidae, Insect taxonomy, Parasitic insects, Rice, Zoogeography.

670-69  
OBSERVATIONS AND RECORDS FOR SOME BRITISH THYSANOPTERA. VII. THRIPIDAE, THRIPS FLAVUS SCHRANK AND THRIPS BREVICORNIS PRIESNER.  
G D Morison  
*Entomologist (London)* 101(1264):205-212 REF  
Sep 1968 421 EN8  
Reports, Taxonomy, Thripidae, Thrips brcvicornis, Thrips flavus, Thysanoptera.

671-69  
NEW REARED NEOTROPICAL SPECIES OF ROGAS NEES (HYMENOPTERA: BRACONIDAE).  
C F W Muesebeck  
*Entomol News (Philadelphia)* 71(10):257-261  
Dec 1960 421 EN88  
Insect identification, Insect rearing, Insect taxonomy, Research, Rogas.

672-69  
A NEW GENUS AND SPECIES OF ARMoured SCALE (HOMOPTERA: COCCOIDEA: DIASPIDIDAE) FROM ETHIOPIA.  
J Munting  
*Entomol Soc Southern Afr J* 31(1):209-211  
Mar 1968 420 EN86  
Diaspididae, Insect taxonomy.

673-69  
CHLOROPID FLIES OF THE GENUS DICRAEUS LW. (DIPTERA, CHLOROPIDAE).  
E P Narchuk  
*Entomol Rev* 46(2, APR-JUN):245-256 MAP REF  
Jun 1967 421 R322AE  
Catalogs, Chloropidae, Insect biology, Insect genetics, Insect morphology, Insect taxonomy, Sex behavior, Zoogeography.

674-69  
CALLIPHORA SUBALPINA (RINGDAHL) NEW FOR DENMARK AND OTHER SPECIES OF CALLIPHORA (DIPTERA: CALLIPHORIDAE) FOUND ON THE STINKHORN (PHALLUS IMPUDICUS). (DA)  
B O Nielsen  
*Flora Fauna* 73(2):68-70 REF  
Jun 1967 410 F662  
Calliphora, Insect taxonomy, Phallus impudicus, Zoogeography. English summary.

675-69  
NOTES ON AND DESCRIPTIONS OF APHELIA, CLEPSIS AND CHORISTONEURA SPECIES (LEPIDOPTERA) TORTRILIDAE.  
N S Obratzsov  
*N Y Entomol Soc J* 76(4):240-252  
Dec 1968 420 N48J  
Catalogs, Insect taxonomy, Tortricidae.

676-69  
SUPPLEMENTARY NOTES ON THE GENUS PSEUDOLIPRUS OF JAPAN (COLEOPTERA: CHRYSOMELIDAE-ALTICINAE).  
M Ohno  
*Shikoku Entomol Soc Trans* 9(2):44-46  
Sep 1966 420 SH6  
Alticinae, Anatomy, Insect identification, Insect names, Insect taxonomy, Research.

677-69  
ON THE SYRPHID LARVAE ATTACKING THE APHIDS IN JAPAN (DIPTERA).  
T Okuno  
*Mushi* 41(10):123-141  
03 Dec 1967 421 M97

Aphidiidae, Biological control (insects), Catalogs, Insect taxonomy, Larvae, Parasitic insects, Syrphidae, Zoogeography.

678-69  
NEW SPECIES OF HORSE FLIES (DIPTERA, TABANIDAE) FROM PALAEARCTICA.  
N G Olsufiyev  
*Entomol Rev* 46(2, APR-JUN):225-231  
Jun 1967 421 R322AE  
Catalogs, Insect taxonomy, Tabanidae, Zoogeography.

679-69  
LONGJUNGUIS ELISABETHAE, N. SP.. A NEW SWEDISH APHID (HEMI.).  
F Ossianilsson  
*Entomol Tidskr* 88(3-4):130-132  
31 Dec 1967 421 EN891  
Aphididae, Insect taxonomy.

680-69  
CONTRIBUTION TO THE KNOWLEDGE OF THE TINEIDAE OF THE EASTERN MEDITERRANEAN. (GE)  
G Petersen  
*Acta Ent Bohemoslov* 1(65):52-66 REF  
1968 420 C33  
Entomology, Insect identification, Insect taxonomy, Tineidae.

681-69  
THE STATUS OF THE NAME PROSIMULIUM ALBIONENSE ROTHFELS.  
B V Peterson  
*Entomol Soc Ontario Proc* 95:142-143  
1964 420 ON8  
Insect identification, Prosimulium albionense, Reports, Research, Taxonomy.

682-69  
THE GENUS GYNANISA WALKER (LEPIDOPTERA: SATURNIIDAE).  
E Pinhey  
*Entomol Soc Southern Afr J* 31(1):123-132  
Mar 1968 420 EN86  
Africa, Insect taxonomy, Saturniidae.

683-69  
DESCRIPTION OF TWO NEW BUPRESTIDAE. (GE)  
H Pochon  
*Arbeitsgemeinsch Osterr Entomol Z* 19(2/3):49-51  
1967 421 W633  
Buprestidae, Coleoptera, Insect taxonomy. Sternocera brunescens n. sp. from Tanganyika, and Jullodis onopordi mandli n. sp. from Asia Minor.

684-69  
THE IMPORTANCE OF ACCURATELY IDENTIFYING SPECIMENS.  
E J Popham  
*Entomologist (London)* 100(1249):156  
Jun 1967 421 EN8  
Insect identification, Insect taxonomy.

685-69  
A NEW SPECIES OF TRACHYSPHYRUS FROM THE ANDES OF ECUADOR (HYMENOPTERA, ICHNEUMONIDAE).  
C C Porter  
*Psyche* 74(1):27-33 MAP  
Mar 1967 421 P95  
Entomology, Ichneumonidae, Insect identification, Insect taxonomy, Trachysphyrus.

686-69  
TWO NEW SPECIES OF MENOPONIDAE (MALLOPHAGA) FROM THE FALCONIFORMES.  
R D Price  
*J Med Entomol* 4(3):319-321  
10 Aug 1967 421 J828  
Insect identification, Insect taxonomy, Menoponidae, Research.

687-69  
A REVIEW OF THE GENUS TURACOCECA WITH DESCRIPTION OF A NEW SPECIES (MALLOPHAGA: MENOPONIDAE).  
R D Price  
*Entomol Soc Wash Proc* 70(3):258-263  
Sep 1968 420 W27  
Insect identification, Mallophaga, Menoponidae, Taxonomy, Turacocea.

688-69  
NEW STENINAE FROM THE SOVIET UNION INCLUDING COMMENTS ON SYNONYMS (COLEOPTERA, STAPHYLINIDAE). 53. CONTRIBUTION TO THE KNOWLEDGE OF THE STENINAE. (GE)  
V Putz  
*Notuloe Entomol* 48(3):93-102 REF  
1968 421 N84  
Catalogs, Insect taxonomy, Staphylinidae.

689-69  
THE MACROPTEROUS FORM OF ULOPA TRIVIA GERMAR (HEM., CICADELLIDAE).  
W J Quesne  
*Entomol Mon Mag (SER.4)* 99(287-8):201  
Nov 1963 421 EN86  
Color, Insect flight, Insect identification, Molting (insects), Research, Ulopa trivida.

690-69  
COLEMBOLA FAUNA OF CHILE II. (SP)  
E H Rapoport I Rubio  
*Acto Biol Venezuelico* 6(1):52-67  
31 Mar 1968 475 AC86  
Catalogs, Collembola, Insect taxonomy.

691-69  
NEUQUENAPHIS PAPILLATA, A NEW NOTHOFAGUS-INFESTING APHID FROM CHILE, WITH A REVIEW OF RELATED SPECIES FROM SOUTH AMERICA (HOMOPTERA: APHIDIDAE).  
W R Richards  
*Can Entomol* 100(11):1199-1207  
Nov 1968 421 C16  
Aphididae, Homoptera, Neuquenaphis papillata, Nothofagus, Taxonomy, Zoogeography.

692-69  
A NEW SPECIES OF IZIPHYA FROM ONTARIO AND QUEBEC, WITH A REVIEW OF THE NEARCTIC SPECIES (HOMOPTERA: APHIDIDAE).  
W R Richards  
*Can Entomol* 100(11):1207-1226 REF  
Nov 1968 421 C16  
Aphididae, Homoptera, Iziphya, Taxonomy, Zoogeography.

693-69  
CALAPHIS MANITOBIENSIS, A NEW APHID COLLECTED ON BETULA PUMILA IN MANITOBA (HOMOPTERA: APHIDIDAE).  
W R Richards  
*Can Entomol* 100(11):1229-1230  
Nov 1968 421 C16  
Aphididae, Betula, Calaphis manitobensis, Homoptera, Taxonomy, Zoogeography.

694-69  
A NEW GENUS OF PARASITIC TACHINID FLIES (DIPTERA, TACHINIDAE) FROM SOVIET CENTRAL ASIA.  
V A Rikhter  
*Entomol Rev* 46(2, APR-JUN):281-282  
Jun 1967 421 R322AE  
Catalogs, Insect taxonomy, Parasitic insects, Tachinidae, Zoogeography.

695-69  
NOTES ON A FEW MEXICAN SCARABAEIDAE (COLEOPTERA).  
M Robinson  
*Entomol News (philadelphio)* 71(4):105-106  
Apr 1960 421 EN88

Anomala insitiva, Ateuchus texanus, Bothynus selanderii, Color, Insect identification, Research, Scarabaeidae, Taxonomy.

696-69  
PALEARCTIC SPECIES OF THE GENUS SPHENOMETOPA TOWNSEND (DIPTERA, SARCOPHAGIDAE).  
B B Rodendorf  
*Entomol Rev* 46(2, APR-JUN):264-273  
Jun 1967 421 R322AE  
Catalogs, Insect morphology, Insect taxonomy, Sarcophagidae, Zoogeography.

697-69  
THE IMMATURE INSTARS OF THE CLEPTOPARASITIC GENUS DIOXYS (HYMENOPTERA: MEGACHILIDAE).  
J G Rozen  
*N Y Entomol Soc J* 75(4):236-248 REF  
Dec 1967 420 N48  
Dioxys, Insect taxonomy, Larvae.

698-69  
DISTRIBUTION OF SEED BEETLES (COLEOPTERA, BRUCHIDAE) IN THE FOREST-STEPPE ZONE OF THE EASTERN UKRAINE.  
A P Rybalko  
*Entomol Rev* 46(1 JAN-MAR):92-96  
Mar 1967 421 R322AE  
Bruchidae, Food habits, Insect ecology, Surveys, Zoogeography.

699-69  
A PRELIMINARY REVIEW OF THE GENUS ISONEUROTHIRPS AND THE SUBGENUS THIRIPS (ISOTHIRIPS) (THYSANOPTERA: THIRIPIDAE).  
K Sakimura  
*Pacific Insects* 9(3):429-436  
20 Aug 1967 421 P11  
Catalogs, Insect taxonomy, Thripidae.

700-69  
TWO NEW SPECIES OF CRAB SPIDERS (ARANAEAE: THOMISIDAE) FROM NORTH DAKOTA.  
R J Sauer  
*Can Entomol* 100(11):1148-1150  
Nov 1968 421 C16  
Ebo dondalei, Spiders, Taxonomy, Thomisidae, Xysticus posti, Zoogeography.

701-69  
ON THE SYNONYMS OF THE BARK BEETLES XVI. 242. CONTRIBUTION TO THE MORPHOLOGY AND TAXONOMY OF THE SCOLYTOIDEA. (GE)  
K E Schedl  
*Entomol Tidskr* 88(3-4):141-163  
31 Dec 1967 421 EN891  
Catalogs, Insect taxonomy, Scolytidae, Zoogeography.

702-69  
COLEOPTERA FROM NORTHEAST AFRICA. SCOLYTIDAE AND PLATYPODIDAE. 255. CONTRIBUTION TO THE MORPHOLOGY AND TAXONOMY OF THE SCOLYTIDAE. (GE)  
K E Schedl  
*Notuloe Entomol* 48(3):143-148 MAP  
1968 421 N84  
Catalogs, Insect morphology, Insect taxonomy, Scolytidae.

703-69  
BITING MIDGES OF THE GENUS CULICOIDES MG. (DIPTERA, CERATOPOGONIDAE) FROM THE VALLEY OF THE MIDDLE REACHES OF THE DESNA.  
A D Shevchenko  
*Entomol Rev* 46(1 JAN-MAR):97-106 REF  
Mar 1967 421 R322AE  
Catalogs, Culicoides, Insect taxonomy.

704-69  
TWO NEW CHLOROPS MG. (DIPTERA, CHLOROPIDAE) FROM KAZAKHSTAN.  
Ye S Smirnov  
*Entomol Rev* 46(2, APR-JUN):259-260  
Jun 1967 421 R322AE  
Catalogs, Chloropidae, Insect taxonomy, Zoogeography.

705-69  
A NEW SPECIES OF AGATHYmus AND A NEW SUBSPECIES OF MEGATHYmus (LEPIDOPTERA, RHOPALOCERA, MEGATHYMIDAE).  
D B Stallings J R Turner  
*Entomol News (philadelphio)* 71(5):109-115  
May 1960 421 EN88  
Agathymus, Cuticle, Food plants, Insect identification, Megathymus, Research, Taxonomy.

706-69  
A STATISTICAL STUDY OF THE TAXONOMY OF CASSIDINAE (COL. CHRYS.). (ABSTRACT). (GE)  
W Steinhausen  
*Z Angew Entomol* 61(4):407  
May 1968 421 Z36  
Cassidinae, Chrysomelidae, Insect taxonomy, Statistical analysis. To be published in full in Deutsche Entomologische Zeitschrift.

707-69  
THE BUTTERFLY FAUNA OF PIAN SAN GIACOMO, MISOX, GRAUBUNDEN (A CONTRIBUTION TO THE LEPIDOPTERA FAUNA OF SWITZERLAND). (GE)  
O Sterzl  
*Entomol Gesell Basel* 17(1):12-20  
Mar 1967 QL461.E58  
Insect collection, Insect taxonomy, Lepidoptera, Zoogeography. List of 185 Lepidoptera caught between 4 July and 10 August 1964.

708-69  
THE GENUS SOMATIA SCHINER, II. (DIP-TERA: SOMATIIDAE).  
G C Steyskal  
*Entomol Soc Wash Proc* 70(3):255-257  
Sep 1968 420 W27  
Diptera, Insect identification, Somatiidae, Taxonomy.

709-69  
TWO NEW BAGOUS-SPECIES FOR FINLAND (COLEOPTERA, CURCULIONIDAE). (SW)  
S Stockmann  
*Notuloe Entomol* 48(3):148  
1968 421 N84  
Curculionidae, Insect taxonomy.

710-69  
DISCOVERY OF THE MALE OF THE GENUS PSEUDHOMALOPODA (HYMENOPTERA: CHALCIDOIDEA-ENCYRTIDAE).  
T Tachikawa  
*Shikoku Entomol Soc Trans* 9(1):29-30  
Apr 1966 420 SH6  
Anatomy, Cuticle, Habrolepis, Insect rearing, Pseudhomalopoda shikokuensis, Research.

711-69  
THE LARVA OF HOMOSUSICA EUGRAPHIA JANSE (LEPIDOPTERA: LIMACODIDAE).  
J G Theron  
*Entomol Soc Southern Afr J* 31(1):231-233  
Mar 1968 420 EN86  
Insect morphology, Larvae, Limacodidae.

712-69  
SELECTION OF LECTOTYPES FOR SOME SPECIES OF EUXOA HUBNER DESCRIBED BY J. B. SMITH (LEPIDOPTERA: NOCTUIDAE).  
E L Todd  
*Entomol Soc Wash Proc* 70(3):263-280 REF  
Sep 1968 420 W27  
Euxoa, Insect identification, Lepidoptera, Noctuidae, Taxonomy.

## ENTOMOLOGY

713-69

713-69  
NOTES ON THE MALLOPHAGAN GENUS COMATOMENOPON AND DESCRIPTIONS OF TWO NEW SPECIES.

D W Tuff  
*J Med Entomol* 4(3):247-250

10 Aug 1967 421 J828

Comatomenopon, Insect behavior, Insect identification, Research, Taxonomy.

714-69

COMMENTS ON POPULATION DYNAMICS OF EXOTIC INSECTS.

R Van Den Bosch  
*Entomol Soc Amer Bull* 14(2):112-115

Jun 1968 423.9 EN8

Biological control (insects), Climate, Demography, Insect biology, Insects, Parasitic insects, Pest control, Population.

Species mentioned are Saissetia oleae, Metaphycus helvolus, Saissetia persimilis infesting Veronia, Apanteles flaviconchae, Colias eurytheme, Colias philodice, Theroaphis trifolii, Trioxys complanatus, Praon exsoletum, Aphelinus asychis, Epilachna varivestis, and Paradexoides epilachnae.

715-69

THE OHTHOPTERA OF ALASKA, YUKON AND THE MACKENZIE DISTRICT OF THE NORTHWEST TERRITORIES.

V R Vickery

*Amer Entomol Soc Trans* 93(3):249-278 MAP

REF

Sep 1967 420 P53

Northwest Territory, Orthoptera, Taxonomy, Zoogeography.

716-69

DISCOVERY OF THE FEMALE OF PHEMIGOSTOLA SYNEMONISTIS STRAND, 1909 (LEP. AGARISTIDAE). (FR)

P Viette

*Lambillonea* 67(1/2):5-7

25 Feb 1968 420 N15

Entomology, Insect identification, Insect taxonomy, Phemigostola synemonistis.

717-69

NEW OR LITTLE KNOWN QUADRIFID NOCTUIDAE OF MADAGASCAR III. (LEP. NOCTUIDAE). (FR)

P Viette

*Lambillonea* 67(1/2):9-20

25 Feb 1968 420 N15

Entomology, Insect identification, Insect taxonomy, Noctuidae.

718-69

PIONOSOMUS NITENS NOV. SP., A NEW TYPE OF LYGAEIDAE FROM NORTH AFRICA (HEM. HET. LYGAEIDAE). (GE)

E Wagner

*Deut Entomol Ges Mitt* 26(5):78-80

31 Dec 1967 420 D482

Entomology, Insect identification, Insect taxonomy, Lygaeidae, Pionosomus nitens.

719-69

HARPOCERA CYPRIA NOV. SP., A NEW TYPE OF MIRIDAE FROM THE ISLAND OF CYPRUS (HEM. HET.). (GE)

E Wagner

*Deut Entomol Ges Mitt* 27(1):9-12

15 Mar 1968 420 D482

Entomology, Harpocera cypria, Insect identification, Insect taxonomy, Miridae.

720-69

ON A MIRID FROM MOROCCO (HETEROPTERA). (GE)

E Wagner

*Notulae Entomol* 48(3):103-112

1968 421 N84

Catalogs, Insect taxonomy, Miridae.

721-69

TWO NEW MIRIDS FROM CYPRUS (HETEROPTERA). (GE)

## BIBLIOGRAPHY

*Amer Entomol Soc Trans* 93(3):279-318 MAP

REF

Sep 1967 420 P53

Coleoptera, Mexico, Polyphylla, Zoogeography.

722-69

THE GENUS ALLOEONOTUS FIEBER, 1878 (HETEROPTERA, MIRIDAE). (GE)

E Wagner

*Notulae Entomol* 48(3):117-125

1968 421 N84

Catalogs, Insect geography, Insect taxonomy, Miridae.

723-69

THE SUBGENUS COMPSOCEROCORIS REUTER, 1876 THE GENUS PHYTOCORIS FALLEN (HETEROPTERA, MIRIDAE). (GE)

E Wagner

*Notulae Entomol* 47(4):127-146

1967 421 N84

Catalogs, Insect geography, Insect taxonomy, Miridae.

724-69

THE BRITISH TERATOCORIS FIEBER 1858 (HEM., MIRIDAE) INCLUDING T. ELEGANS SP. NOV..

G E Woodroffe

*Entomologist (London)* 100(1252):229-237

Sep 1967 421 EN8

Catalogs, Miridae, Zoogeography.

725-69

A NEW GENUS AND SPECIES OF ORIBATELLID MITE FROM COLORADO (ACARINA: ORIBATEI).

T A Woolley

*Kans Entomol Soc J* 40(1):32-37 REF

Jan 1967 420 K13

Biology, Insect identification, Insect taxonomy, Oribatellidae, Research.

726-69

OBSERVATIONS ON THE INSECT LIFE OF CZECHOSLOVAKIA; TOGETHER WITH SOME NOTES ON OTHER FAUNA AND FLORA.

A Woottton

*Entomologist (London)* 100(1251):202-212 MAP

Aug 1967 421 EN8

Catalogs, Insects, Zoogeography.

727-69

NOTES ON SCIOMYZIDAE COLLECTED IN PADDY FIELD (DIPTERA), I.

K Yano

*Mushi* 41(15):189-200 REF

28 Mar 1968 421 M97

Catalogs, Insect taxonomy, Rice, Sciomyzidae, Survey, Zoogeography.

728-69

LARVAL STAGES OF THE LEAF-MINERS FOUND IN SHIKOKU. (COLEOPTEROUS LEAF-MINERS OF JAPAN. VII).

T Yano

*Shikoku Entomol Soc Trans* 8(4):115-132

May 1965 420 SH6

Biology, Insect identification, Insect names, Insect taxonomy, Larvae, Leaf miners, Morphology, Research.

729-69

NEW RECORD OF AGRIOSPHODRUS DOHRNI SIGNORET FROM SHIKOKU (HEMIPTERA: REDUVIIDAE).

T Yano T Tachikawa

*Shikoku Entomol Soc Trans* 8(4):132

May 1965 420 SH6

Agriosphodrus dohrni, Prunus yedoensis, Research, Taxonomy.

730-69

POLYPHYLLA HARRIS IN AMERICA, NORTH OF MEXICO. I. THE DIFFRACTA COMPLEX (COLEOPTERA: SCARABAEIDAE: MALOLOTHINAE).

R M Young

*Amer Entomol Soc Trans* 93(3):279-318 MAP

REF

Sep 1967 420 P53

Coleoptera, Mexico, Polyphylla, Zoogeography.

731-69

SOME NEW OR LITTLE KNOWN SPECIES OF NON-GALL MAKING CECIDOMYIIDAE FROM HIKO-SAN (DIPTERA).

J Yukawa

*Mushi* 41(4):63-70 REF

10 Aug 1967 421 M97

Catalogs, Cecidomyiidae, Insect taxonomy, Zoogeography.

732-69

NEW SPECIES OF BOMBYLIIDAE (DIPTERA) FROM PALAEARCTICA.

V F Zaytsev

*Entomol Rev* 46(2, APR-JUN):242-244

Jun 1967 421 R322AE

Bombyliidae, Catalogs, Zoogeography.

733-69

A TABULAR SUMMARY OF THE SPECIES OF THE FRINGE-WINGED INSECT GENUS DENDOTHIRPS UZEL 1895 (THYSANOPTERA: THRIPIDAE). (GE)

R Zur Strassen

*Entomol Soc Southern Afr J* 31(1):213-220

Mar 1968 420 EN86

Catalogs, Insect taxonomy, Thripidae, Zoogeography, English abstract.

## PHYSIOLOGY AND BIOCHEMISTRY

734-69

ACTIVITIES OF THE WORKING GROUPS. WORKING GROUP POPULATION DYNAMICS OF THE COLORADO BEETLE. (GE)

*Entomophaga* 5(1):3-5

1960 421 EN835

Demography, Insect behavior, Insect eggs, Leptinotarsa decemlineata, Pest control, Predaceous insects.

735-69

ACTIVITIES OF THE WORKING GROUPS. WORKING GROUP SAN JOSE LOUSE. (FR)

*Entomophaga* 5(1):5-6

1960 421 EN835

Ecology, Insect behavior, Pest control, Prospaltella perniciosi, Reproduction.

736-69

FOOD-PLANT SELECTION BY POECILOCERUS HIEROGLYPHICUS (KLUG) (ACRIDIDAE: PYRGOMORPHINAE) AND SOME OF THE RECEPTORS INVOLVED.

F T Abushama

*Roy Entomol Soc London Proc Ser A Gen Entomol*

43(7/9):96-104 REF

31 Oct 1968 420 L84PA

Antennae, Chemoreceptors, Feeding, Food plants, Grasshoppers, Insect behavior, Poecilocerus hieroglyphicus, Research.

737-69

ON A VIRUS OF FLACHERIE IN THE SILK WORM, BOMBYX MORI. (FR)

K Aizawa Y Furuta

*Entomophaga Mem Hors Ser* (2):373-376

1964 421 EN835M

Bombyx mori, Flacherie, Insect diseases, English summary.

738-69

SEASONAL AND DAILY CHIRPING CYCLES IN THE NORTHERN SPRING AND FALL FIELD CRICKETS, GRYLLUS VELETIS AND G. PENNSYLVANICUS.

R D Alexander G H Meral

*Ohio J Sci* 67(4):200-209 REF

Jul 1967 410 OH3

Gryllus pennsylvanicus, Gryllus veletis, Insect behavior, Research, Stridulation, Temperature, Time, Weather.

## BIBLIOGRAPHY

## ENTOMOLOGY

762-69

739-69  
**MYIOLIA CAESIO HARR. (DIPT., TRYPETIDAE) RECAPTURED NEAR ELTHAM, N. W. KENT; WITH A SUGGESTION AS TO THE PROBABLE HOST-PLANT.**  
 A A Allen  
*Entomol Mon Mag (SER.4)99(287-8):214*  
 Nov 1963 421 EN86  
 Forests, Insect behavior, Myiolia caesio, Research.

740-69  
**ALOPHORA OBESA F. (DIPT., TACHINIDAE) BRED FROM NEOTTIGLOSSA PUSILLA GMEL. (HEM., PENTATOMIDAE).**  
 A A Allen  
*Entomol Mon Mag (SER.4)99(277-9, JAN-MAR):35*  
 1963 421 EN86  
 Food plants, Insect breeding, Larvae, Morphology, Pentatomidae, Research, Tachinidae.

741-69  
**THE OMMOCHROME I AS A PROBABLE PRECURSOR OF OMMIN IN OMMOCHROME SYNTHESIS OF PLODIA INTERPUNCTELLA AND EPHESTIA KUHNIELLA. (GE)**  
 F F dc Almeida  
*Z Vererbungslehre 102(4):307-315*  
 15 Nov 1968 442.8 Z34  
 Chromatography, Ephestia, Insect physiology, Ommochromes, Plodia interpunctella, Pteridine. English abstract

742-69  
**LARVAE OF INJURIOUS BEETLES (COLEOPTERA) IN THE SOILS OF THE ARCHEDA FOREST FARM, VOLGOGRAD PROVINCE.**  
 N S Andrianova  
*Entomol Rev 46(1, JAN-MAR):81-91 REF*  
 Mar 1967 421 R322AE  
 Coleoptera, Insect ecology, Larvae, Surveys.

743-69  
**DESTRUCTION OF WASPS.**  
 Anonymous  
*Phar J 201(5469):168*  
 24 Aug 1968 396.8 P49  
 Benzene hexachloride, Carbon tetrachloride, Chemical control (insects), Chlordane, Cyanides, DDT, Dusting, Hymenoptera, Rotenone, Toxicity.

744-69  
**THE EFFECT OF ECOLOGICAL CONDITIONS ON THE APPEARANCE OF AN INTESTINAL BACTERIAL DISEASE IN THAUMETOPOEIA PITOCAMPA SCHIFF. (FR)**  
 P Aiger  
*Entomophaga Mem Hors Ser (2):507-509*  
 1964 421 EN835M  
 Climate, Ecology, Insect diseases, Intestines, Larvae, Mortality, Temperature, Thaumetopoeia pitocampa. English summary.

745-69  
**EFFECTS OF OXYGEN DEPRIVATION ON AQUATIC MIDGE LARVAE UNDER NATURAL AND LABORATORY CONDITIONS.**  
 J M Augenfeld  
*Physiol Zool 40(2):149-158 REF*  
 Apr 1967 410 P56  
 Aquatic insects, Chironomus plumosus, Glycogen, Insect metabolism, Insect rearing techniques, Lactic acid, Larvae, Oxygen.

746-69  
**SEPARATION OF FREE AMINO ACIDS AND DERIVATIVES IN THE TSETSE FLY GLOSSINA PALPALIS (DIPTERA) BY ION-EXCHANGE CHROMATOGRAPHY.**  
 R A Balogun F Hanimann P S Chen  
*Experientia 25(1):93-95 REF*  
 15 Jan 1969 475 EX7  
 Amino acids, Chemical analysis, Chromatography, Glossina, Pupae.

747-69  
**WASP NESTS.**  
 C C Banks  
*New Zeal J Agr 116(2):64-65,67*

Feb 1968 23 N48J  
 Chemical control (insects), DDT, Insect biology, Smoke, Vespidae.

The chemical control of wasps in New Zealand is discussed. The application techniques for gasoline, smoke and DDT are given.

748-69  
**A LIFE HISTORY STUDY OF THE ASII SEED WEEVILS, THYSANOCNEMIS BISCHOFFI BLATCHLEY AND T. HELVOLA LECONTE. (COLEOPTERA; CURCULIONIDAE).**  
 J H Barger R H Davidson  
*Ohio J Sci 67(2):123-127*  
 Mar 1967 410 OH3  
 Hibernation, Insect biology, Insect morphology, Larvae, Research, Thysanocnemis bischoffi, Thysanocnemis helvola.

749-69  
**CEROPLASTES RUSCI L. (HOMOPTERA, COCCOIDEA, LECANINAE) AN INTERESTING EXAMPLE FOR THE STUDY OF POPULATION DYNAMICS. (FR)**  
 C Benassy E Biliotti  
*Entomophaga 8(3):213-217 REF*  
 1963 421 EN835  
 Ceroplastes rusci, Insect outbreaks, Moranila californica, Parasitic insects, Population, Scutellista cyanea, Tetrastichus. English summary.

750-69  
**RAISING CATERPILLARS WHY. (FR)**  
 J T Betz  
*Alexanor 5(1):8-11*  
 13 Apr 1967 421 AL2  
 Caterpillars, Entomologists, History, Insect rearing, Lepidoptera.

751-69  
**AN ATTEMPT TO DESCRIBE LIVING SPACE OF AN INSECT FORM (MODEL AND OUTDOOR EXPERIMENTS WITH DROSOPHILIDAE). (ABSTRACT). (GE)**  
 F Beye  
*Z Angev Entomol 61(4):456-457*  
 May 1968 421 Z36  
 Attractants, Drosophila melanogaster, Insect behavior, Pigments (plant). To be published in Deutsch Entomologische Zeitschrift.

752-69  
**THE OCCURRENCE OF DERMESTES PERUVIANUS LA PORTE AND DERMESTES HAEMORRHOIDALIS KUSTER (COL., DERMESTIDAE) IN BRITAIN.**  
 E T Beatz  
*Entomol Mon Mag (SER.4)99(277-9, JAN-MAR):30-31*  
 1963 421 EN86  
 Dermestes haemorrhoidalis, Dermestes peruvianus, Great Britain, Insect behavior, Insect identification, Research.

753-69  
**MORPHOLOGY, MUSCULATURE AND INTEGRATION OF THE REPRODUCTION ORGANS OF LETHOCERUS INDICUM (HEMIPTERA: BELOSTOMATIDAE).**  
 S Bhargava  
*Kans Entomol Soc J 40(1):111-124 REF*  
 Jan 1967 420 K13  
 Insect anatomy, Lethocerus indicum, Morphology, Reproductive organs, Research.

754-69  
**EFFECTS OF FUNIGANTS ON THE SPIRACLES AND THE POSSIBLE ROLE OF NEUROHUMOR ON THE SPIRACULAR ACTIVITY OF PERIPLANETA AMERICANA (L.).**  
 S S Bhatia G T Tonapi  
*Experientia 24(12):1224-1225*  
 15 Dec 1968 475 EX7  
 Fumigants, Insect neurophysiology, Insect physiology, Periplaneta americana, Spiracles.

755-69  
**A COMPARISON OF THE DEVELOPMENT OF METATHORACIS WING-PADS IN THE APTEROUS EARWIG, EUBORELLIA ANNULIPES (LUCAS) AND THE WINGED LABIDURA RIPARIA (PALLAS) (DERMAPTERA, LABIDURIDAE).**  
 R D S Bhatnagar  
*Entomologist (London) 100(1250):189-192*  
 Jul 1967 421 EN8  
 Development, Embryology, Insect physiology, Labiduridae.

756-69  
**THE MASS INCREASE IN THE POPULATION OF TORTRIX VIRIDANA L. (GE)**  
 A Birchler  
*Entomol Gesell Basel 17(1):7-8*  
 Mar 1967 QL461.E58  
 Insect outbreaks, Population (insects), Population increase, Quercus, Tortrix viridana.

757-69  
**COMPARISON OF THE EFFECTIVENESS OF TWO PUPAL PARASITES IN FINDING A HOST. (GE)**  
 H Bogenschutz  
*Z Angev Entomol 61(4):428-434*  
 May 1968 421 Z36  
 Forest insects, Insect flight, Insect traps, Itoplectis conquisitor, Natural control (insects), Parasitic insects, Pimpla turionellae, Rhyacionia buoliana. English summary

758-69  
**MAJOR ENVIRONMENTAL FACTORS INDUCING THE TERMINATION OF LARVAL DIAPAUSE IN CHAOBORUS AMERICANUS JOHANSEN (DIPTERA: CULICIDAE).**  
 W E Bradshaw  
*Biol Bull 136(1):2-8*  
 Feb 1969 442.8 B52  
 Chaoboridae, Diapause, Insect adaptation, Insect nutrition, Photoperiodism.  
 The termination of diapause in Chaoborus americanus is dependent upon the photoperiod and available food source. Although light may be the major stimulus in winter and food supply in spring and summer, the combined effects are not additive but synergistic.

759-69  
**STUDIES ON NORTH AMERICAN ANTS. II. MYRMECINA.**  
 W L Brown  
*Entomol News (Philadelphia) 78(9):233-240*  
 Nov 1967 421 EN88  
 Color, Insect identification, Myrmecina, Research.

760-69  
**ON THE RELATIONSHIPS BETWEEN FOREST BIRDS AND FOREST ANTS. (GE)**  
 H Bruns  
*Entomophaga 5(1):77-80*  
 1960 421 EN835  
 Birds, Competition, Forest insects, Forests, Formica polyctena, Formica rufa.

761-69  
**CHARACTERIZATION OF THE THERMOSABLE TOXIN IN THE DIFFERENT INDUSTRIAL PREPARATIONS OF BACILLUS THURINGIENSIS BERLINER. (FR)**  
 A Burgeon  
*Phytol-phytopharm 16(2):83-89 REF*  
 Jun 1967 464.8 P564  
 Biological assay, Biological control (insects), Heat, Mamestra brassicae, Pieris brassicae, Toxins.

762-69  
**THE HOST AND PRESENT STATUS OF ALYSIA RIDIBUNDA SAY IN MISSOURI (HYMENOPTERA: BRACONIDAE).**  
 L P Jr. Burgess C W Wingo  
*Entomol Soc Wash Proc 70(3):204-208*  
 Sep 1968 420 W27

# ENTOMOLOGY

763-69

*Alysia ridibunda*, Hymenoptera, Insect behavior, Parasitism, *Ravinia assidua*.

763-69

ENTOMOLOGICAL EVALUATION WITHIN THE COLUSA PROJECT.

W E Burgoyne K G Whitesell N B Akesson

*Dawn Earth* 24(2, FALL):13-15

1968 381 D75

Aerial spraying, Anopheles, Chemical control (insects), *Culex*, Culicidae, Diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate, O,O i, Larvicide, Rice, Tables (data), Temperature.

764-69

THE ESTABLISHMENT OF A LABORATORY COLONY OF THE TOMATO HORNWORM *PROTOPARCE QUINQUEMACULATA* HAW. (LEPIDOPTERA: SPHINGIDAE).

J K Campbell

*Entomol Soc Ontario Proc* 95:143-146

1964 420 ON8

Eggs, Feeding, Insect cages, Insect rearing, Laboratories, Larvae, *Manduca quinquemaculata*, Research.

765-69

AGE STRUCTURE, POPULATION DYNAMICS AND VECTOR POTENTIAL OF *PHLEBOTOMUS* IN NORTHERN CALIFORNIA. I. DISTINGUISHING PAROUS FROM NUL-LIPAROUS FLIES.

B N Chaniotis J R Anderson

*J Med Entomol* 4(3):251-254 REF

10 Aug 1967 421 J828

Anatomy, Demography, Glands (insects), Insect rearing, Laboratories, *Phlebotomus*, Viscera.

766-69

SOME OBSERVATIONS ON THE ECOLOGY OF PHYTOSEIID MITES (ACARINA: PHYTOSEIIDAE) IN CALIFORNIA.

D A Chant C A Fleschner

*Entomophaga* 5(2):131-139

1960 421 EN835

Acarina, Ecology, Phytoseiidae.

767-69

SOME SPECIES OF LEPTOCONOPS OF THE ORIENTAL AND PACIFIC REGIONS (DIP-TERA, CERATOPOGONIDAE).

N Chanthawanich M D Delfinado

*J Med Entomol* 4(3):294-303 REF

10 Aug 1967 421 J828

Geography, Insect identification, Insect names, Insect taxonomy, Leptoconops, Research.

768-69

FREE AMINO ACIDS AND DERIVITIVES IN EGGS OF *DROSOPHILA*, *CULEX* AND *PHORMIA*. (GE)

P S Chen F Hanemann H Briegel

*Rev Suisse Zool* 74(3):570-589 REF

Dec 1967 410 R324

Amino acids, *Culex*, *Drosophila melanogaster*, Eggs, Insect biochemistry, Insect physiology, *Phormia*. English and French abstracts

769-69

COMBINED UTILIZATION OF ENTOMOPHAGES AND MICROORGANISMS WITH A VIEW OF REPLACING OR LIMITING THE USE OF CHEMICAL TREATMENTS. (FR)

V A Chepetilnikova N S Fedorintchik

*Entomophaga Mem Hors Ser* (2):511-514

1964 421 EN835M

*Bacillus cereus*, Biological control (pests), Chemical control (pests), *Diataraxia oleracea*, Insect pests, *Mamestra brassicae*, Microorganisms, Parasitic insects, *Pieris brassicae*, *Pieris rapae*, *Trichogramma*. English summary.

770-69

PHOTOPERIODISM IN THE HONEY BEE, *APIS MELLIFERA* L. (HYMENOPTERA, APIDAE).

A V Cherednikov

*Entomol Rev* 46(1 JAN-MAR):33-37

Mar 1967 421 R322AE

# BIBLIOGRAPHY

*Apis mellifera*, Hibernation, Insect behavior, Insect physiology, Photoperiodism.

771-69

MANIFESTATIONS OF VIRAL INFECTION IN *AGROTIS SEGETUM* SCHIFF. AND IN *HADENA SORDIDA* BKII UNDER CONDITIONS OF THE SIMULTANEOUS EXISTENCE OF TWO VIRUSES. (FR)

O I Chvetzova

*Entomophaga Mem Hors Ser* (2):393-396

1964 421 EN835M

*Agrotis segetum*, *Granuloses*, *Hadena sordida*, Insect diseases, Larvae, Mortality, Polyhedroses, Temperature, Tissues. English summary.

772-69

SIBLING SPECIES IN THE EURYTOMA ROSAE GROUP. (HYM., EURYTOMIDAE).

M F Claridge R R Askew

*Entomophaga* 5(2):141-153 REF

1960 421 EN835

*Eurytoma rosae*, *Eurytomidae*, Hymenoptera, Taxonomy.

773-69

SOME ELEMENTARY STATISTICS FOR THE ENTOMOLOGIST. VI. THE ANALYSIS OF VARIANCE.

F M M Clarke

*Entomologist (London)* 100(1250):181-183

Jul 1967 421 EN8

Methodology, Statistical analysis, Variance analysis.

774-69

ECOLOGICAL NOTES ON SOME ANTHOPHAGUS SPECIES IN BRITAIN AND NORTHERN NORWAY (COLEOPTERA, STAPHYLINIDAE).

M F Chidgey D M Murphy

*Entomologist (London)* 100(1250):184-188

Jul 1967 421 EN8

Ecology, *Staphylinidae*, Zoogeography.

775-69

THE IMPORTANCE OF THE ISOTOPE DILUTION IN THE STUDY OF THE RENEWAL OF PHOSPHORUS DURING-LARVAL GROWTH OF *PLODIA INTERPUNCTELLA*. (FR)

G Couture L Huot J M Perron

*J Insect Physiol* 14(11):1559-1565 REF

Nov 1968 421 J825

Biochemistry, Insect physiology, Isotopes, Larvae, *Phosphorus*, *Plodia interpunctella*, Radioactivity. English summary

776-69

STUDIES ON FREE COLONIES OF CRYPTOCERUS TEXANUS SANTSCHI (HYMENOPTERA: FORMICIDAE).

W S Creighton

*Psyche* 74(1):34-41

Mar 1967 421 P95

*Cryptocerus texanus*, *Formicidae*, Insect behavior, Light, Research, Social insects, Temperature.

777-69

REARING MANTISPA VIRIDIS WALKER IN THE LABORATORY (NEUROPTERA, MANTISPIDAE).

J A Davidson

*Entomol News (Philadelphia)* 80(2):29-31

Feb 1969 421 EN88

Insect rearing, Life cycle, *Mantispidae*.

778-69

2,4-HEXADIENYL BUTYRATE AND RELATED COMPOUNDS HIGHLY ATTRACTIVE TO YELLOW JACKETS (*VESPULA* spp.).

H G Davis G W Eddy T P McGovern M Beroza

*J Invertebrate Pathol* 4(3):275-280

10 Aug 1967 421 J828

Attractants, Esters, Hexadienyl butyrate, 2,4-, Organic compounds, Research, Traps, *Vespa*.

779-69

TREEHOPPERS OF CERTAIN MISSISSIPPI RIVER ISLANDS (HOMOPTERA, MEMBRACIDAE).

C J Dennis

*Entomol News (Philadelphia)* 80(2):32-33

Feb 1969 421 EN88

Insect ecology, *Membracidae*, *Quercus*, Surveys.

780-69

ELECTROPHYSIOLOGICAL RESPONSES OF THE CHEMORECEPTORS OF THE BLOWFLY TO SODIUM SALTS OF FATTY ACIDS.

V G Dethier F E Hanson

*Nat Acad Sci Proc* 60(4):1296-1303 REF

Aug 1963 500 N21P

Chemoreceptors, Electrophysiology, *Phormia regina*, Sodium salts.

781-69

ASPECTS OF THE BIOLOGY OF CHILICOLA ASHMEADI IN COSTA RICA (HYMENOPTERA: COLLETIDAE).

G C Eickwort

*Kans Entomol Soc J* 40(1):42-73 REF

Jan 1967 420 K13

*Chilicola ashmeadi*, Cuticle, Eggs, Insect behavior, Insect biology, Insect identification, Morphology, Pollination, Research.

782-69

FEEDING AND CROP EMPTYING IN THE COCKROACH *LEUCOPHAEA MADERAE*.

F Englemann

*J Insect Physiol* 14(11):1525-1531

Nov 1968 421 J825

Crops, Feeding, Food consumption, Insect physiology, *Leucophaea maderae*, Nervous system, Research.

783-69

THE SPERMATOPOHORE OF *TETRIX LATREILLE* (ORTHOPTERA: TETRIGIDAE).

R A Farrow

*Entomol Mon Mag (SER.4)* 99(287-8):217-223

Nov 1963 421 EN86

Anatomy, Biology, Insect cages, Morphology, Research, Spermatophores, *Tetrix*, Viscera.

784-69

DETECTION OF ANTIBODY AND ANTIGEN IN THE MILKWEED BUG, *ONCOPELTUS FASCIATUS*.

D Feir G T Schmidt

*Experientia* 24(12):1217-1218 REF

15 Dec 1968 475 EX7

Antibodies, Antigens, Immunity, Insect biochemistry, *Oncopteltus fasciatus*.

785-69

SAWFLIES (HYM., SYMPHYTA) IN BERKSHIRE: ADDENDA AND CORRIGENDA.

J C Felton

*Entomol Mon Mag (SER.4)* 99(277-9 JAN-MAR):64

1963 421 EN86

Research, Symphyta.

786-69

PRELIMINARY ATTEMPTS AT CONTROL OF THE LARVA OF COMMON COCKCHAFER *MELOLONTA MELOLONTA* L. BY MEANS OF NYCOSIS OF *BEAUVERIA TENELLA* (DELACR.) *SIEMASZKO*. (FR)

P Ferron

*Phytat-phytopharm* 16(2):115-123

Jun 1967 464.8 P564

*Beauperla tenella*, Biological control (insects), Entomogenous fungi, Larvae, *Melolontha melolontha*.

787-69

THE IDENTIFICATION OF OTIORRHYNCHUS LARVAE FROM BLACKCURRANT ROOTS WITH DESCRIPTION OF THE LARVAE OF *O. CLAVIPES* (BONSD.) AND *O. SINGULARIS* (L.) (COL., CURCULIONIDAE).

V W Fowler

*Entomol Mon Mag (SER.4)99(287-8):210-212*  
Nov 1963 421 EN86  
Anatomy, Color, Currants, Insect identification, Insect rearing, Larvae, Morphology, *Otiorynchus*, *Otiorynchus clavipes*, *Otiorynchus singularis*.

**788-69**  
**AUSTRALIA'S BIRD-SNARING SPIDERS AND OTHERS.**  
H Franca  
*Entomologist (london) 100(1252):238-240*  
Sep 1967 421 EN8  
Araneae, Food habits, Insect behavior.

**789-69**  
**OBSERVATIONS ON THE REARING OF PERILLUS BILOCULATUS (FABR.) (HETEROPT. PENTATOMIDAE), A PREDATOR OF THE COLORADO BEETLE, IMPORTED FROM NORTH AMERICA. (GE)**  
J Franz A Szmidt  
*Entomophaga 5(2):87-110* REF  
1960 421 EN835  
Heteroptera, Insect rearing, *Leptinotarsa decemlineata*, *Perillus bioculatus*, Predaceous insects. English summary

**790-69**  
**NOTES ON THE SYSTEMATICS AND MORPHOLOGY OF THE LACEBUG SUBFAMILY CANTACADERINAE (HEMIPTERA: TINGIDAE).**  
R C Froeschner  
*Entomol Soc Wash Proc 70(3):245-254* REF  
Sep 1968 420 W27  
Cantacaderinae, Hemiptera, Insect physiology, Morphology.

**791-69**  
**THE STRUCTURE OF THE DAMAGE DONE BY CHILO SUPPRESSALIS IN THE FIRST OUTBREAK AREA. I. RELATION OF BORING STAGE TO GROWTH OF LARVAE AND AMOUNT OF RICE PLANTS DAMAGED.**  
TRANSL. I6860.  
K Fujita A Toki  
12 P.  
Chiho suppressalis, Insect outbreaks, Insect pests, Insect physiology, Larvae, Plant injuries, Rice. Translation from An. Rpt. Soc. Plant Protection 15:83-86, 1964. translated by Ayako Iimura.

**792-69**  
**INFLUENCE OF THE NATURE OF REARING MEDIA ON THE SENSITIVITY OF THE LARVAL STAGE OF MUSCA DOMESTICA LINNAEUS TO THE THERMOSTABLE TOXIN OF BACILLUS THURINGIENSIS BERLINER. (FR )**  
P F Galichet  
*Phytat-phytopharm 16(2):97-104* REF  
Jun 1967 464.8 P564  
Bacillus thuringiensis, Culture media, Heat, Insect rearing, Larvae, Mortality, *Musca domestica*, Toxins.

**793-69**  
**PARASITES OF SOCIAL WASPS (VESPIDAE). (GE)**  
R Gauss  
*Z Angew Entomol 61(4):453-454*  
May 1968 421 Z36  
Parasitic insects, Social insects, Vespidae.

**794-69**  
**HOST RANGE OF INSECT VIRUSES. (FR )**  
S Gershenson  
*Entomophaga Mem Hors Ser (2):361-372* REF  
1964 421 EN835M  
Host range, Lepidoptera, Polyhedroses, *Tipula* iridescent virus, Virus diseases (insects). English summary.

**795-69**  
**INTERACTIONS BETWEEN INDIVIDUALS AND SOCIAL PHENOMENA. (FR )**  
J Gerret  
*Arch Neer Zool 18(2):205-252* REF  
Jul 1968 410 AR27

Chemoreceptors, Insect ecology, Sense organs, Social insects. English and German abstracts

The author presents an analytical review showing that social behavior is dependent upon the existence of sensory codes, that these are not confined to the social animals, and that the degree of socialization may be regarded as the scope of the code repertoire for a given species.

**796-69**  
**MORPHOLOGY AND RELATIONSHIPS OF THE MALE OF AN ASTEROLECANIUM SPECIES (HOMOPTERA: COCCOIDEA: ASTEROLECANIIDAE).**  
J H Giliomee  
*Entomol Soc Southern Afr J 31(2):297-308* REF  
Sep 1968 420 EN86  
Asterolecaniidae, Insect evolution, Insect morphology, Reproductive organs.

**797-69**  
**EXPERIMENTS WITH RADIOACTIVE ISOTOPES ON FOREST ANTS. (GE )**  
K Goesswald W Kloft  
*Entomophaga 5(1):33-41* REF  
1960 421 EN835  
Forest insects, Formicidae, Isotopes, Radioactivity, Research.

**798-69**  
**NEW WAYS FOR THE DIFFERENTIATION OF THE GROUPS OF FOREST ANTS (HYMENOPTERA, FORMICIDAE). (GE )**  
K Goesswald G Schmidt  
*Entomophaga 5(1):13-31* REF  
1960 421 EN835  
Chromatography, *Formica rufa*, Formicidae, Hymenoptera, Insect identification, Morphology.

**799-69**  
**INTRANUCLEOLAR DNA IN THE SALIVARY GLAND CELLS OF THE MELONFLY, DACUS CUCURBITAE.**  
H N B Gopalan C M S Dass  
*Experientia 24(12):1190-1191* REF  
15 Dec 1968 475 EX7  
Dacus cucurbitae, Deoxyribonucleic acid, Insect biochemistry, Insect cytology, Salivary glands (insects).

**800-69**  
**REFLECTIONS ON EPIZOOTOIOLOGY. (FR )**  
P Grison  
*Entomophaga Mem Hors Ser (2):483-506* REF  
1964 421 EN835M  
Biological control (insects), Dosage, Economic entomology, Epidemiology, Insect diseases, Insect ecology, Insect pests, Microorganisms. English summary.

**801-69**  
**CURRENT ACCOMPLISHMENTS AND PERSPECTIVES OF THE MICROBIOLOGICAL CONTROL. (FR )**  
P Grison  
*Phytat-phytopharm 16(2):63-74* REF  
Jun 1967 464.8 P564  
Bacillus thuringiensis, Biological control (insects), Insect diseases, Integrated control (insects), Microorganisms, Viruses.

**802-69**  
**SYSTEMATIC INVESTIGATIONS OF WEATHER-CONTROLLED FLIGHT AND MIGRATION PHENOMENA OF VIRUS-CARRYING INSECTS IN WESTERN, NORTHERN, AND SOUTHERN GERMANY. (GE )**  
E Haine  
*Z Angew Entomol 61(4):435-441* REF  
May 1968 421 Z36  
Aphididae, Insect ecology, Insect flight, Insect migration, Insect pests, Insect vectors, Plant disease transmission, Virus diseases (plants), Weather. English summary.

**803-69**  
**A RAPID METHOD OF MARKING CORN EARWORM MOTHS WITH DYES FOR RELEASE STUDIES.**  
E A Harrell J W Snow  
*U S Agr Res Serv ARS (42-149):6P*  
Nov 1968 A58.9 R31  
Aerosols, Biological control (insects), Chemosterilants, Dyes, *Heliothis zea*, Labeling, Research, Spraying, Tepa.

**804-69**  
**OXYGEN UPTAKE OF SINGLE INSECTS DETERMINED WITH A POLAROGRAPHIC OXYGEN ELECTRODE.**  
D K Hayes M S Schechter E Mensing J Horton  
*Anal Biochem 26(1):51-60* REF  
10 Oct 1968 381 AN13  
Biochemistry, Insect physiology, Insect respiration, Oxygen, Oxygen electrodes, Polarography.

**805-69**  
**THE DEVELOPMENT OF THE POLYHEDROSIS VIRUS AFTER ORAL INFECTION OF GALLERIA MELLONELLA L. (FR )**  
F Heitor  
*Entomophaga Mem Hors Ser (2):455-458*  
1964 421 EN835M  
Galleria mellonella, Insect diseases, Polyhedroses, Tissue culture. English summary.

**806-69**  
**FIVE GEOMETRIDAE OF CORSICA. (FR )**  
C Herbulot  
*Alexandri 5(6):244-246*  
1968 421 AL2  
Entomology, Geometridae, Insect identification, Insect taxonomy.

**807-69**  
**THE TECHNIQUE OF DETERMINING THE EFFECTIVENESS OF BACILLUS THURINGIENSIS PREPARATIONS (SPORE-ENDOTOXIN-COMPLEX) ON CATERPILLARS IN THE LABORATORY. (GE )**  
W Herfs  
*Entomophaga 8(3):163-181* REF  
1963 421 EN835  
Bacillus thuringiensis, Methodology, Mortality, *Pieris rapae*, *Porthezia dispar*. English summary.

**808-69**  
**THE INFLUENCE OF CHEMICAL PLANT PROTECTION PREPARATIONS ON BENEFICIAL INSECTS. (GE )**  
W Herfs  
*Z Angew Entomol 61(4):407-412*  
May 1968 421 Z36  
Beneficial insects, Pesticides, Plant protection.

**809-69**  
**DEVELOPMENTAL EFFECTS OF X-RAYS ON EMBRYOS OF DROSOPHILA MELANOGASTER.**  
P E Hildreth  
*Nat Acad Sci Proc 58(5):1924-1929*  
Nov 1967 500 N21P  
*Drosophila melanogaster*, Embryology, Insect physiology, X-rays.

**810-69**  
**OBSERVATION OF THE SEXUAL BEHAVIOR OF HOFMANNOPHILA PSEUDOSPRETELLA. (ABSTRACT). (GE )**  
G Hoeller  
*Z Angew Entomol 61(4):446*  
May 1968 421 Z36  
Geotropism, Hofmannophila pseudospretella, Insect behavior, Olfactometers, Scent glands, Sex behavior. To be published in 62(1), 1968, of this journal.

**811-69**  
**THE GENUS DIARTHROPHALLUS TRAGARDH, 1946 (ACARINA: DIARTHROPHALLIDAE).**  
P E Hunter S Glover  
*Entomol Soc Wash Proc 70(3):193-197*

Sep 1968 420 W27  
Acarina. Anatomy, Diarthrophallus, Insect physiology, Larvae.

812-69  
COMPARED ACTIVITY OF THE DIFFERENT PATHOGENS TO THE LARVAE OF COMMON COCKCHAFER (MELOLONTA MELOLONTA L.). (FR )

B Hurpin P H Robert  
*Phytol-phytopharm* 16(2):105-113 REF

Jun 1967 464.8 P564

Insect diseases, Larvae, Melolontha melolontha, Temperature.

813-69  
SURVIVAL OF EGGS OF ERETMAPODITES CHRYSGASTER GRAHAM (DIPTERA: CULICIDAE).  
A R Hylton  
*J Med Entomol* 4(3):374-375

10 Aug 1967 421 J828

Breeding, Culicidae, Eggs, Eretmapodites chrysogaster, Insect protective devices, Ovipositors, Research, Storage.

814-69  
THE IMPORTANCE OF MORTALITY FACTORS ON THE OCCASION OF THE MASS-APPEARANCE OF THE NUNMOTH IN THE FORESTED DISTRICT OF LOWER AUSTRIA, 1964-1967. (GE )  
E Jahn

*Z Angew Entomol* 61(4):387-393  
May 1968 421 Z36

Insect outbreaks, Lymantria monacha, Mortality, Natural control (insects), Parasitic insects, Predaceous insects. English summary.

815-69  
THE POLYHEDROSIS OF MAMESTRA BRASSICA. (GE )  
J Jasic J Vcber

*Entomophago Mem Hors Ser* (2):453-454  
1964 421 EN835M

Insect diseases, Mamestra brassicae, Polyhedroses. English summary.

816-69  
CHRYSONINA AMERICANA (L.) (COL., CHRYSOMELIDAE) IN BRITAIN.  
C Johnson

*Entomol Mon Mag (SER.4)99(287-8):228-229  
Nov 1963 421 EN86*

Chrysolina americana, Color, Hibernation, Insect behavior, Insect identification, Insect migration.

817-69  
OBSERVATIONS ON POSTEMBRYONIC DEVELOPMENT IN EUTROMBICULA SPLENDENS (ACARI-ACARIFORMES).  
D E Johnston R R Wacker

*J Med Entomol* 4(3):306-310 REF

10 Aug 1967 421 J828

Eutrombicula splendens, Larvae, Molting (insects), Morphology, Nomenclature, Research.

818-69  
HISTOCHEMISTRY OF SPERMATOGENESIS IN THE SPIDER LYCOSA CHAPERI.  
U Kanwar

*Punjab Univ Res Bull (N s)18(PT 1-2):95-108*

REF

Jun 1967 513 EA72

Chemical analysis, Cytology, Histochemistry, Lycosa, Spermatogenesis.

819-69  
DISTRIBUTION OF NITROGEN DURING THE EMBRYONIC DEVELOPMENT OF THE MEAL-WORM, TENEBRIOS MOLITOR LINNAEUS.  
R P Kelly D Ludwig

*N Y Entomol Soc J* 75(1):45-53 REF

Mar 1967 420 N481

Biochemistry, Embryology, Insect morphology, Insect physiology, Nitrogen, Tenebrio molitor.

820-69

THE STRUCTURE OF THE DEFENSE GLANDS IN ALLEculidae AND LAGRIidae (COLEOPTERA).

D A Kendall

*Roy Entomol Soc London Trans* 120(PT 5):17P  
08 Oct 1968 420 L84

Abdomen, Alleculidae, Coleoptera, Glands (insects), Histology, Illustrations, Insect anatomy, Insect protective devices, Lagriidae.

821-69

DIFFERENTIAL SPECTRA OF CYTOCHROMES IN DEVELOPMENT OF THE FLIGHT-MUSCLES IN ANTERAEA PERNYI.

A K Klepke J W Michejda

*Acta Ent Bohemoslov* 1(65):1-4 REF  
1968 420 C33

Antheraea pernyi, Biogenesis, Cytochromes, Feeding, Hormones, Insect flight, Insect morphology, Mitochondria, Muscles, Research, Temperature, Tissues.

822-69

THE USE OF RADIOACTIVE ISOTOPES AND OF IONIZING RAYS IN APPLIED ENTOMOLOGY. (GE )

W Kloft

*Z Angew Entomol* 61(4):413-422 REF  
May 1968 421 Z36

Economic entomology, Isotopes, Radiation, Radioactive tracers.

823-69

INSECTS DESTROY THEMSELVES. (GE )

W Kloft

*Entomol Gesell Basel* 17(3):78-87

Sep 1967 QL461.E58

Aerial spraying, Chemosterilants, Cochliomyia hominivorax, Insect control, Insect eggs, Insecticides, Irradiation, Sex attractants, Sterilization (insects).

824-69

TROPHIC SYMBIOSIS BETWEEN FOREST ANTS AND PLANT LICE WITH STUDIES ON THE RECIPROCAL EFFECTS BETWEEN PLANT LICE AND PLANT TISSUES. (GE )

W Kloft

*Entomophago* 5(1):43-54 REF

1960 421 EN835

Aphididae, Forest insects, Formicidae, Phloem, Plants, Research, Symbiosis, Tissues.

825-69

THE ADAPTIVE FEEDING HABIT OF A PINE CATERPILLAR.

A B Klots

*N Y Entomol Soc J* 75(1):43-44

Mar 1967 420 N48J

Food habits, Larvae, Noctuidae, Pinus strobus.

826-69

THE DISPERSION OF THE RESETTLEMENT OF DENDROCTONUS MICANS KUGEL. ON PICEA ORIENTALIS LINK, IN THE BORSHOM GORGE.

D N Kobachidze T G Nisharadze T S Imnadze T D Kobachidze

*Anz Schadlingskunde* 41(8):116-118

Aug 1968 421 AN9

Chemical control (insects), Dendroctonus micans, Insect flight, Insect migration, Picea orientalis, Spraying, Weather.

827-69

PALEARCTIC SPECIES OF EGG PARASITES OF THE GENUS TELENOMUS HALIDAY (HYMENOPTERA, SCELIONIDAE, TELENOMINAE).

M A Kozlov

*Entomol Rev* 46(2, APR-JUN):215-224 REF

Jun 1967 421 R322AE

Catalogs, Natural control (insects), Telnomus.

828-69

CONTRIBUTION TO THE STUDY OF THE POPULATION DYNAMIC OF INSECTS: I. STIMULATING ACTION OF THE HOST, ACROLEPIA ASSETELLA Z., ON THE MULTIPLICATION OF AN HYMENOPTERA ICHNEUMONIDAE (DIADROMUS SP.). (FR )

V Labeyrie

*Entomophaga Mem Hors Ser* (1):193P REF

Feb 1960 421 EN835M

Acrolepia assetella, Demography, Fertility, Hymenoptera, Insect behavior, Ovulation, Reproduction, Research, Tables (data). English summary.

829-69

LIFE HISTORY, HABITAT, AND TAXONOMIC CHARACTERS OF THE LARVA OF MOCHLONYX FULIGINOSUS.

R W Lake

*Entomol News (philadelphio)* 80(2):34-37

Feb 1969 421 EN88

Culicidae, Habitats, Insect biology, Insect morphology, Insect taxonomy, Life cycle.

830-69

A REVIEW OF THE BRITISH TRIGONOTYLUS (HETEROPTERAMIRIDAE, MIRINAE).

I Lansbury

*Entomol Mon Mag (SER.4)99(287-8):230-232*

Nov 1963 421 EN86

Color, Cuticle, Insect identification, Research, Trigonotylus psammaecolor, Trigonotylus ruficornis.

831-69

CELLULAR DIFFERENTIATION AND PATTERN FORMATION DURING METAMORPHOSIS OF THE MILKWEED BUG ONCOPELTUS.

P A Lawrence

*Develop Biol* 19(1):12-40 REF

Jan 1969 442.8 D49

Analogs, Insect cytology, Juvenile hormone, Metamorphosis, Oncopeltus fasciatus.

832-69

A DESCRIPTION OF TWO MAGDALIS LARVAE (COL. CURC.) AND A COMPARISON BETWEEN THESE AND THE SCOLYTUS LARVAE (COL. SCOL.).

B Lekander

*Entomol Tidskr* 88(3-4):123-129

31 Dec 1967 421 EN891

Curculionidae, Insect morphology, Larvae, Scolytidae.

833-69

DOSAGE STUDIES WITH LOW VOLUME APPLICATIONS OF DURSBAN INSECTICIDE.

H W Lembright

*Down Earth* 24(2, FALL):16-19

1968 381 D75

Aedes melanimon, Aedes nigromaculis, Aerial spraying, Anopheles fuscopennis, Chemical control (insects), Culex tarsalis, Culicidae, Diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate, O,O,d Insecticide application, Insecticides, Rice.

834-69

ON THE EFFECT OF LOWER TEMPERATURES ON SEVERAL SAWFLY LARVAE (HYMENOPTERA, TENTHREDINIDAE). (GE )

E Lindqvist

*Notulae Entomol* 47(4):164

1967 421 N84

Development, Larvae, Temperature, Tenthredinidae.

835-69

PARASITES OF LADYBIRDS (COLEOPTERA, COCCINELLIDAE) IN LENINGRAD PROVINCE.

Yc Yu Lipa V P Sem'yanov

*Entomol Rev* 46(1, JAN-MAR):43-45 REF

Mar 1967 421 R322AE

Coccinellidae, Fungi, Insects, Microorganisms, Natural control (insects), Parasitism.

836-69  
LIFE CYCLE AND DEVELOPMENT OF LEIOPHRON PALLIPES CURTIS (HYMENOPTERA: BRACONIDAE, EUPHORINAE) IN FIVE MIRID HOSTS IN THE BELLEVILLE DISTRICT.  
C C Loan  
*Entomol Soc Ontario Proc* 95:115-121  
1964 420 ON8  
Aging, Food plants, Insect identification, Insects, Leiophron pallipes, Morphology, Parasitism, Research.

837-69  
THE ECOLOGY OF THE PUGNACIOUS ANT, ANOPOLEPIS CUSTODIENS (SMITH) (HYMENOPTERA: FORMICIDAE), IN THE CENTRAL ORANGE FREE STATE-I. THE ABOVE-GROUND ACTIVITY LEVEL OF WORKERS. (AF)  
J F Louw  
*Entomol Soc Southern Afr J* 31(2):241-248  
Sep 1968 420 EN86  
Formicidae, Insect behavior, Insect ecology. English abstract

838-69  
AN INTERESTING BROOD OF EUDIA PAVONIA (ATTACIDAE). (FR)  
G Luquet  
*Alexanor* 5(1):2-7  
13 Apr 1967 421 AL2  
Hymenoptera, Insect eggs, Insect rearing, Insect taxonomy, Larvae, Parasitism, Pupae, Saturniidae.

839-69  
TOLERANCE OF SPRUCE BUDWORM TO MALATHION; MONTANA, NEW MEXICO POPULATIONS SHOW NO DIFFERENCES.  
R L Lyon M Page S J Brown  
*USDA Forest Serv Res Note PSW- 173:1-6*  
1968 A99.9 F7652  
Chemical control (pests), Choristoneura occidentalis, Insecticides, Malathion, Population statistics, Spraying, Tables (data).

840-69  
INSECTICIDE INDEX; AN INDEX INCLUDING FULL DETAILS OF THOSE ALREADY USED, OR OF POTENTIAL FUTURE USE, FOR LOCUST CONTROL.  
R D MacCuaig  
77P REF ROME, ITALY, FOOD AND AGRICULTURE ORGANIZATION  
Jul 1966 SB945.L7M33  
Acrididae, Chemical control (insects), Experimental insects, Indexing, Insecticides. Over 100 insecticides are discussed.

841-69  
ECOLOGY AND BIOGEOGRAPHY OF HIGH ALTITUDE INSECTS.  
M S Mani  
*Ser Entomol* 4:527P REF  
1968 QL461.S4  
Altitude, Arthropoda, Insect ecology, Insects, Temperature, Zoogeography. .

842-69  
THE MEXICAN SPECIES OF PROMACHUS IN THE SUBGENUS AMBLYONYCHUS (PROMACHINA) (DIPTERA: ASILIDAE).  
C H Martin  
*Kans Entomol Soc J* 40(2):156-163 REF  
Apr 1967 420 K13  
Cuticle, Insect identification, Insect taxonomy, Promachus, Research.

843-69  
FOOD SELECTION BEHAVIOUR OF THE FULLY GROWN LARVA OF THE INDIAN SANN HEMP MOTH, UTETHEISA PULCHELLA LINNE (LEPIDOPTERA) ARCTIIDAE.  
R B Mathur  
*Mushi* 41(8):113-119 REF  
01 Oct 1967 421 M97  
Arctiidae, Food habits, Insect behavior, Larvae.

844-69  
NESTING BIOLOGY OF THE SOCIAL WASP MICROSTIGMUS COMES (HYMENOPTERA, SPHECIDAE, PEMPHREDONINAE).  
R W Matthews  
*Psyche* 75(1):23-45 REF  
Mar 1968 421 P95  
Insect behavior, Insect biology, Insect nests, Microstigmus comes, Parasitic insects, Predaceous insects, Social insects, Sphecidae.

845-69  
FURTHER RECORDS OF FLEAS OCCURRING AS STRAGGLERS ON RABBITS COLLECTED IN KENT.  
A R Mead-Briggs  
*Entomol Mon Mag (SER 4)* 99(277-9 JAN-MAR):25-26  
1963 421 EN86  
Oryctolagus cuniculus, Rabbits, Research, Siphonaptera.

846-69  
NESTS AND SOCIAL BEHAVIOR OF THREE SPECIES OF PSEUDAUGOCHLOROPSIS (HYMENOPTERA: HALICTIDAE).  
C D Michener W B Kerfoot  
*Kans Entomol Soc J* 40(2):214-232  
Apr 1967 420 K13  
Eggs, Habitats, Insect behavior, Insect morphology, Nesting, Ovaries, Pseudaugochloropsis, Research.

847-69  
NESTS OF SOME AFRICAN MEGACHILID BEES, WITH DESCRIPTION OF A NEW (OPLITIS) (HYMENOPTERA, AOIUDEA).  
C D Michener  
*Entomol Soc Southern Afr J* 31(2):337-359 REF  
Sep 1968 420 EN86  
Catalogs, Insect taxonomy, Megachilidae, Nesting.

848-69  
COLORADO BEETLE.  
*Great Brit Min Agr Fish Food Adv Leafl* (71):6P MAP  
1967 10 G79LA  
Coccinellidae, Coleoptera, Crop losses, Epidemiology, Insect physiology, Leptinotarsa decemlineata, Macroderctylus subspinosus.

849-69  
FURTHER INVESTIGATIONS ON THE ARTIFICIAL BREEDING OF THE OLIVE FLY-DACUS OLEAE GMEL.-UNDER ASEPTIC CONDITIONS.  
I Moore  
*Entomophaga* 7(1):53-57  
1962 421 EN835  
Biological control (insects), Breeding, Dacus oleae, Insect pests, Research. French summary.

850-69  
HONEYDEW AS FOOD OF HILL-BUILDING FOREST ANTS. (GE)  
H Mueller  
*Entomophaga* 5(1):55-75 REF  
1960 421 EN835  
Food, Forest insects, Formica polyctena, Honeydew, Insect behavior, Symbiosis.

851-69  
THE EFFECTS OF SODIUM FLUORIDE AND IODOACETAMIDE ON MUTATION INDUCTION BY X-IRRADIATION IN MATURE SPERMATOZOA OF DROSOPHILA.  
R N Mukherjee F H Sobels  
*Mutation Res* 6(2,SEP-OCT):217-225  
1968 443.8 M98  
Biochemistry, Drosophila melanogaster, Glycolysis, Iodoacetamide, Mutation, Sodium fluoride, Spermatozoa, X-rays.

852-69  
LOW VOLUME SPRAYING BY AIR TO CONTROL MOSQUITO LARVAE IN CALIFORNIA.  
T D Mulhern  
*Down Earth* 24(2,FALL):4-6 REF

1968 381 D75  
Aerial pest control, Chemical control (insects), Culicidae, DDT, Dosage, Economics, Insect vectors, Insecticide application, Larvicides, Spraying.

853-69  
MELANISM IN NEW JERSEY CATOCALA SCHRANK (LEPIDOPTERA, NOCTUIDAE).  
J Muller  
*N Y Entomol Soc J* 75(4):195-196  
Dec 1967 420 N48J  
Catocala, Insect evolution, Insect genetics, Melanism.

854-69  
GYNANDROMORPHIC PALEACRITA VERNATA (LEPIDOPTERA: GEOMETRIDAE).  
J Muller  
*N Y Entomol Soc J* 76(4):266  
Dec 1968 420 N48J  
Gynandromorphism, Insect morphology, Paleacrita vernata.

855-69  
WIREWORMS (COLEOPTERA, ELATERIDAE) OF THE SMOLENSK REGION, THEIR DISTRIBUTION AND INCIDENCE IN DIFFERENT SOIL TYPES.  
V G Nadvorniy  
*Pedobiologia* 8(3):296-305 REF  
1968 56.8 P343  
Elateridae, Insect ecology, Soil insects, Surveys, Zoogeography.

856-69  
QUANTITATIVE DETERMINATION OF ACID AND ALKALINE PHOSPHATASE IN DIFFERENT PARTS OF THE ALIMENTARY CANAL OF DESERT LOCUST, SCHISTOCerca GREGARIA (FORSKAL).  
S N H Naqvi S H Ashrafi A A H Qadri  
*Pakistan J Sci Indus Res* 10(3):204-207 REF  
Jul 1967 475 P174  
Acid phosphatase, Alkaline phosphatase, Gastrointestinal system, Insect biochemistry, Quantitative analysis, Schistocerca gregaria.

857-69  
THE MALE GENITALIA OF SOME CRIORHINA MEIGEN SPECIES FROM NORTH AMERICA (DIPTERA: SYRPHIDAE).  
J L Nayar  
*N Y Entomol Soc J* 76(4):297-302  
Dec 1968 420 N48J  
Catalogs, Insect morphology, Reproductive organs, Syrphidae.

858-69  
NEW OR LITTLE-KNOWN ELATERIDAE FROM JAPAN. X. (COLEOPTERA).  
H Ohira  
*Shikoku Entomol Soc Trans* 9(2):41-43  
Sep 1966 420 SH6  
Cuticle, Elateridae, Insect identification, Insect taxonomy, Research.

859-69  
THE QUESTION OF THE STATISTICAL PROOF OF DIET-DEPENDENT MORTALITY. (GE)  
B Ohnesorge  
*Z Angew Entomol* 61(4):403-406  
May 1968 421 Z36  
Diet, Forest insects, Mathematical analysis, Mortality, Population, Pristiphora, Sampling (statistics).

860-69  
STRUCTURE AND METAMORPHOSIS OF THE MALPIGHIAN TUBULES OF CALLOSOBRUCHUS MACULATUS (F.) (BRUCHIDAE: COLEOPTERA).  
H R Pajni  
*Panjab Univ Res Bull (N s)* 18(PT 1-2):61-67 REF  
Jun 1967 513 EA72  
Callosobruchus maculatus, Embryology, Insect morphology, Malpighian tubes, Metamorphosis.

861-69

THE EFFECTS OF INJECTED AMINOPTERIN ON EGG PRODUCTION IN RHODNIUS PROLIXUS.

S Patchin K G Davey

*J Insect Physiol* 14(1):1545-1551 REF

Nov 1968 421 J825

Aminopterin, Biochemistry, Chemosterilants, Dosage, Injections, Insect eggs, Insect physiology, Reproduction, Rhodnius prolixus.

862-69

THE BIOLOGICAL CONTROL OF FOREST INSECTS BY MEANS OF THE ANTS OF THE FORMICA RUFA L. GROUP.

M Pavan

*Entomophaga* 5(1):9-11

1960 421 EN835

Biological control (insects), Forest insects, Formica rufa, Formicidae.

863-69

EVIDENCE FOR EXTRACELLULAR SPACE IN THE RHABDOME OF THE HONEYBEE DRONE EYE.

A Perrelet F Baumann

*J Cell Biol* 40(3):825-830 REF

Mar 1969 442.8 J828

Apis mellifera, Electron microscopy, Eyes, Insect morphology.

864-69

INNERVATION OF THE GUT OF THE MIGRATORY LOCUST, LOCUSTA MIGRATORIA L. (ORTHOPTERA, ACRIDIDAE).

S I Plotnikova

*Entomol Rev* 46(1 JAN-MAR):69-71 REF

Mar 1967 421 R322AE

Gastrointestinal system, Insect morphology, Locusta migratoria, Nervous system.

865-69

CONTRIBUTION TO THE STUDY OF POPULATION DYNAMICS. I. POPULATIONAL ANALYSIS OF NASONIA VITRIPENNIS WALK. (HYMENOP., PTEROMALIDAE). (SP)

J E Rabinovich

*Acta Biol Venezolica* 6(1):68-81 REF

31 Mar 1968 475 AC86

Aging, Demography, Pteromalidae. English abstract

866-69

RATE OF MULTIPLICATION AND SEX RATIO IN RELATION TO THE QUANTITY OF FOOD MATERIAL IN BRACON BREVICORNIS WESMAEL AND PERISIEROLA NEPHANTIDIS MUESEBECK.

C S Rao N R Rao E Dharmaraju

*Andhra Agr J* 14(5):165-166

1967 34.2 AN4

Braconidae, Food habits, Hymenoptera, Reproduction, Sex ratios.

867-69

VARIABILITY OF THE PHOTOPERIODIC REACTION IN A NUMBER OF SUCCESSIVE GENERATIONS OF SPIDER MITES (ACARINA).

A P Razumova

*Entomol Rev* 46(2 APR-JUN):159-161

Jun 1967 421 R322AE

Inheritance, Insect physiology, Panonychus ulmi, Photoperiodism, Temperature, Tetranychus.

868-69

THE USE OF A POLYHEDRAL VIRUS DISEASE IN THE CONTROL OF THE PINE SAWFLY NEIDIPRION SERTIFER GEOFFR. IN NORTH-WEST SCOTLAND.

C F Rivers

*Entomophaga Mem Hors Ser* (2):477-480

1964 421 EN835M

Biological control (insects), Insect diseases, Insect pests, Neodiprion sertifer, Polyhedroses. French summary.

869-69

A PRELIMINARY OBSERVATION ON CANNIBALISTIC HABIT IN HIEROGLYPHUS NIGROREPLETUS BOLIVAR (ORTHOPTERA: ACRIDIDAE).

S K A Rizvi

*Mushi* 41(5):71-73 REF

20 Aug 1967 421 M97

Acrididae, Food habits, Temperature.

870-69

INSECT MIGRATION AND AIR CURRENTS. (ABSTRACT). (GE)

H Roer

*Z Angew Entomol* 61(4):428

May 1968 421 Z36

Danaus plexippus, Insect behavior, Insect flight, Insect migration, Wind. To be published in 62(1), 1968, of this journal.

871-69

CHROMOSOMES OF THE PYCNOSELUS INDICUS AND P. SURINAMENSIS COMPLEX (BLATTARIA: BLABERIDAE: PYCNOSELINAE).

L M Roth S H Cohen

*Psyche* 75(1):53-76 REF

Mar 1968 421 P95

Blattidae, Chromosomes, Insect genetics, Pycnoscelus indicus, Pycnoscelus surinamensis.

872-69

BIOLOGICAL NOTES ON DIOXYS POMONAE POMONAE AND ON ITS HOST, OSMIA NIGROBARBATA (HYMENOPTERA: MEGACHILIDAE).

J G Rozen M S Favereau

*N Y Entomol Soc J* 75(4):197-203

Dec 1967 420 N48J

Dioxys pomonae, Insect behavior, Nesting, Osmia nigrobarbata, Parasitism.

873-69

OPTIMUM PERIODS FOR THE PROLIFERATION OF POLYHEDROSIS IN THE CATERPILLARS OF LYMANTRIA DISPAR (LEP. LYMANTRIIDAE). (FE)

A Ruperez

*Entomophaga Mem Hors Ser* (2):515-520

1964 421 EN835M

Biological control (insects), Caterpillars, Insect diseases, Lymantriidae, Polyhedroses, Porthezia dispar. English summary.

874-69

DISEASES OF FOREST DEFOLIATORS OF SPAIN. (FR)

A Ruperez

*Entomophaga Mem Hors Ser* (2):445-447

1964 421 EN835M

Biological control (insects), Geometridae, Insect diseases, Noctuidae, Polyhedroses, Quercus ilex. English summary.

875-69

EPIZOOTIOLOGY OF TRYpanosoma CRUZI IN SOUTHWESTERN NORTH AMERICA. XI-XII. BIOLOGY OF THE GENUS REDUVIUS IN NORTH AMERICA AND THE POSSIBLE RELATIONSHIP OF REDUVIUS TO THE EPIZOOTIOLOGY OF TRYpanosoma CRUZI (HEMIPTERA: REDUVIIDAE) (KINETOPLASTIDA: TRYpanosomatidae).

R E Ryckman A E Ryckman

*J Med Entomol* 4(3):326-334

10 Aug 1967 421 J828

Biology, Epizootic diseases, Feeding, Insect rearing, Reduvius, Research, Trypanosoma cruzi.

876-69

POSTEMBRYONIC DEVELOPMENT OF THE EYE AND ITS GANGLIA OF DROSOPHILA MELANOGASTER.

R C Satija V Aggarwal

*Panjab Univ Res Bull (N s)* 18(PT 1-2):79-93

REF

Jun 1967 513 EA72

Development, Drosophila melanogaster, Eyes, Insect morphology, Nervous system.

877-69

POSTEMBRYONIC DEVELOPMENT OF THE EYE GANGLIA IN ANOPHELES STEPHENSISTON.

R C Satija S Sud

*Panjab Univ Res Bull (N s)* 18(PT 1-2):127-134

REF

Jun 1967 513 EA72

Anopheles stephensi, Development, Eyes, Insect morphology, Metamorphosis, Nervous system.

878-69

HISTOLOGICAL STUDIES ON POSTEMBRYONIC DEVELOPMENT OF THE BRAIN OF DROSOPHILA MELANOGASTER.

R C Satija V Aggarwal

*Panjab Univ Res Bull (N s)* 18(PT 1-2):109-125

REF

Jun 1967 513 EA72

Brain, Drosophila melanogaster, Histology, Metamorphosis.

879-69

STUDIES ON THE BRAIN OF MONOMORIUM INDICUM FOREL (HYMENOPTERA).

R C Satija D Walia

*Panjab Univ Res Bull (N s)* 18(PT 1-2):237-241

Jun 1967 513 EA72

Brain, Formicidae, Insect morphology.

880-69

ORAL AND PARENTERAL TOXICITY OF BACILLUS THURINGIENSIS EXOTOXIN, AND ITS INACTIVATION IN LARVAE OF GALERIA MELLONELLA.

E Schmid M Benz

*Experientia* 25(1):96-98 REF

15 Jan 1969 475 EX7

Bacillus thuringiensis, Galleria mellonella, Insect physiology, Larvae, Poisoning, Toxicology, Toxins.

881-69

NEW EVIDENCE THAT A NUMBER OF LEAF- AND NEEDLE-EATING INSECTS DEPEND ON THE SUGAR-CONTENT OF THEIR FOOD. (GE)

W Schwenke

*Z Angew Entomol* 61(4):365-369

May 1968 421 Z36

Bupalus piniaria, Diet, Food habits, Forest insects, Glucose, Insect behavior, Larvae, Leaves, Pine needles, Trees, Vegetation. English summary

882-69

PHOSPHINE: A VERSATILE FUNIGANT.

P Singh J N Sarid K Krishnamurthy

*Bull Grain Technol* 5(4):214-226 REF

Dec 1967 TS2120.B8

Accident prevention, Chemical control (insects), Dosage, Fumigation, Grain, Insecticide application, Phosphine, Toxicity.

883-69

SOME MUSCID FLIES (DIPT.), OF LANCASHIRE AND CHESHIRE.

P Skidmore

*Entomol Mon Mag (SER 4)* 99(277-9 JAN-MAR):9-19

1963 421 EN86

Aging, Helina, Insect dissemination, Insect morphology, Insect names, Muscidae, Mydaea, Phaonia, Research.

884-69

CIRCADIAN SYSTEMS, II. THE OSCILLATION IN THE INDIVIDUAL DROSOPHILA PUPA; ITS INDEPENDENCE OF DEVELOPMENTAL STAGE.

S D Skopik C S Pittendrigh

*Nat Acad Sci Proc* 58(5):1862-1869 REF

Nov 1967 500 N21P

Diurnal rhythm, Drosophila, Metamorphosis, Photoperiodism, Pupae.

885-69 THE NIGHT-DAY ACTIVITY RHYTHM OF TETRATOMA FUNGORUM F. (COL., TETRATOMIDAE). K P Smith *Entomol Mon Mag (SER.4)99(287-8):234-240* Nov 1963 421 EN86 Equipment, Fungus diseases (insects), Insect behavior, Insect morphology, Polyporus betulinus, Research, Tables (data), Tetratoma fungorum.

886-69 A SPORULATING STRAIN OF BACILLUS POPILLIAE. V R Srinivasan G L Craig *Experientia 24(12):1282-1283* 15 Dec 1968 475 EX7 Bacillus popilliae, Bacteriology, Insect diseases, Popillia japonica, Sporulation.

887-69 THE CREATION OF ARTIFICIAL FOCI OF PARASITES- A NEW METHOD OF APHID PARASITE RELEASE. P Starý *Acta Ent Bohemoslov 1(65):76-77* 1968 420 C33 Aphidius transcaspicus, Aphis craccivora, Biological control (insects), Hyalopterus pruni, Insect colonization, Insect outbreaks, Insect pests, Methodology, Parasitism, Phragmidium, Plant physiology.

888-69 SOIL SURFACE ZOO-MICROBIAL COMPLEX OF ORTHOPTERA AND TENEBRIONIDS IN THE SOUTHEAST ALTAI-MOUNTAINS AND THEIR RELATIONSHIP TO SOIL FORMATION PROCESSES. (GE) I V Stebaev N N Napleкова V V Volkovincer *Pedobiologia 8(3):345-386* REF 1968 56.8 P343 Feces, Food habits, Insect behavior, Orthoptera, Sex, Soil microorganisms, Tenebrionidae. English and Russian abstracts

889-69 NOTES ON REARING PARMENA BALTEUS L.(CERAMBYCIDAE). (FR ) J Steffen *Entomol Gesell Basel 16(4/6):92-98* 1966 QL461.E58 Cerambycidae, Hibernation, Insect behavior, Insect morphology, Insect rearing, Insect taxonomy, Parmena balteus, Parmena pubescens solieri. German summary.

890-69 THE INFLUENCE OF WING-DIMORPHISM ON THE DISTRIBUTION OF CURCULIONIDAE. (GE) W Stein *Z Angew Entomol 61(4):442-445* May 1968 421 Z36 Curculionidae, Insect flight, Polymorphism, Wings (insects), Zoogeography. English summary.

891-69 FACTORS AFFECTING THE SEX RATIO OF APHYTIS PROCLIA WLK. (HYMENOPTERA, APHELINIDAE), EXTERNAL PARASITE ON THE SAN JOSE SCALE. A F Sumaroka *Entomol Rev 46(2,APR-JUN):179-185* REF Jun 1967 421 R322AE Aphytis, Aspidiotus perniciosus, Sex ratios, Zoogeography.

892-69 A CASE OF BACTERIAL EPIZOOTY IN A LARVAL POPULATION OF SELENEPHERA LUNIGERA ESP. (LEPIDOPTERA, LASIOCAMPIDAE). G B Talalayeva *Entomol Rev 46(2,APR-JUN):191-192* Jun 1967 421 R322AE Bacteria, Larvae, Lasiocampidae, Natural control (insects).

893-69 FLIGHTS OF THE ANT POLYERGUS LUCIDUS MAYR. M Talbot *Psyche 75(1):46-52* Mar 1968 421 P95 Formicidae, Insect behavior, Insect flight, Polyergus lucidus.

894-69 STABILITY MECHANISM OF POLYHEDRA. (FR ) L M Tarassevitch E F Oulanova N S Terestchenko *Entomophago Mem Hors Ser (2):397-401* REF 1964 421 EN835M Biochemistry, Insect diseases, Polyhedroses, Virology, Viruses, Volumetric analysis. English summary.

895-69 A PROBABLE HYBRID BETWEEN MELANARGIA RUSSIAE AND MELANARGIA LACHESIS.(NYMPHALIDAE SATYRINAE). (FR ) Ch Tavoillot *Alexonor 5(1):19-24* 13 Apr 1967 421 AL2 Hybrids, Insect physiology, Insect taxonomy, Nymphalidae.

896-69 THE PROBLEM OF THE UTILIZATION OF ENTOMOPATHOGENIC MICROORGANISMS IN COMBINATION WITH INSECTICIDES. (FR ) N A Telenga *Entomophago Mem Hors Ser (2):531-544* REF 1964 421 EN835M DDT, Entomogenous fungi, Hydrogen-ion concentration, Insect pests, Insecticides, Integrated control (insects), Microorganisms, Mortality, Toxins. English summary.

897-69 PROTHORACIC TRACHEAE OF A BUPRESTID BEETLE. G T Tonapi *Naturwissenschaften 55(1):44-45* Jan 1968 474 N213 Buprestidae, Electron microscopy, Insect morphology, Respiratory system, Trachea. An electron microscope study of the unusually large trachea of a buprestid beetle is presented, with diagrams of its ultrastructure.

898-69 NOTES AND DESCRIPTIONS OF SOME LEPTOPSYLLID FLEAS (SIPHONAPTERA). R Traub T M Evans *J Med Entomol 4(3):339-359* REF 10 Aug 1967 421 J828 Food, plants, Geography, Insect dissemination, Insect identification, Insect names, Leptopsyllidae, Research, Siphonaptera.

899-69 ECOLOGY OF VIRUS DISEASES OF INSECTS. (FR ) C Vago *Entomophago Mem Hors Ser (2):423-443* REF 1964 421 EN835M Ecology, Feeding, Insect diseases, Starvation, Temperature. English summary.

900-69 VIRULENCE OF AN INSECT VIRUS INCREASED BY REPEATED PASSAGES. J Veber *Entomophago Mem Hors Ser (2):403-405* 1964 421 EN835M Experimental insects, Galleria mellonella, Inclusion bodies, Insect diseases, Larvae, Polyhedroses. French summary.

901-69 ACACIA GALLING BY A LYCAENID (LEP.). B Verdcourt *Entomol Mon Mag (SER 4)99(287-8):201* Nov 1963 421 EN86

Acacia nubica, Gall-making insects, Larvae, Lycaenidae, Plant galls, Research.

902-69 BREEDING OF EMPUSA MUSCAE AND ITS USE IN FLY CONTROL. (GE ) H Vogel *Anz Schodlingskunde 41(5):76-77* May 1968 421 AN9 Attractants, Breeding, Culture media, Entomogenous fungi, Entomophthora muscae, Fungi, Insect control, Lactic acid, Water.

903-69 THE EFFECT OF THE AMOUNT OF BLOOD TAKEN AND ADDITIONAL CARBOHYDRATE NUTRITION ON OOGENESIS IN FEMALES OF BLOODSUCKING MOSQUITOES OF THE GENUS AEDES (DIPTERA, CULICIDAE) OF VARIOUS WEIGHTS AND AGES. N V Volozina *Entomol Rev 46(1,JAN-MAR):27-32* REF Mar 1967 421 R322AE Aedes, Blood, Carbohydrates, Fertility, Insect nutrition, Insect physiology, Oogenesis.

904-69 SOME INTERESTING FORMS OF LEPIDOPTERA AND SOUVENIRS OF THE CHASE. (FR ) L Weber *Entomol Gesell Basel 16(4/6):99-101* 1966 QL461.E58 Lepidoptera, Zoogeography. German summary.

905-69 MALE GENITALIA OF THE SERICOMYIINI COMPLEX (DIPTERA: SYRPHIDAE). K E Weisman *Entomol News (philadelphio) 78(9):241-250* Nov 1967 421 EN88 Anatomy, Arctophila, Insect dissemination, Insect identification, Reproductive organs, Research, Syrphidae.

906-69 AN ANALYSIS OF THE WAGGLE DANCE AND RECRUITMENT IN HONEY BEES. A M Wenner P H Wells F J Rohlf *Physiol Zool 40(4):317-344* REF Oct 1967 410 P56 Apis mellifera, Bee behavior, Environment, Statistical analysis.

907-69 UPTAKE OF WATER BY EGGS OF CARDIASPINA DENSITEXTA (HOMOPTERA: PSYLLOIDAE) FROM LEAF OF HOST PLANT. T C R White *J Insect Physiol 14(11):1669-1683* REF Nov 1968 421 J825 Absorption, Cardiaspina densitexta, Insect eggs, Insect physiology, Leaves, Ovulation, Reproduction, Water.

908-69 THE MOSQUITO PROBLEM IN COLUSA COUNTY, CALIFORNIA. K G Whitesell *Down Eorth 24(2,FALL):11-12* 1968 381 D75 Aedes melanimon, Aerial spraying, Anopheles, Anopheles freeborni, Chemical control (insects), Culex, Culex tarsalis, Culicidae, Economics, History, Insecticide application, Rice.

909-69 INVESTIGATIONS OF THE DIGESTIVE PROCESSES IN THE COMMON SPIDER MITE, TETRANYCHUS URTICAE KOCH. (GE ) R Wiesmann *Z Angew Entomol 61(4):457-465* May 1968 421 Z36 Digestion, Insect physiology, Tetranychus urticae.

910-69 APANTELES PIERIDIS (BOUCHE) (HYM., BRACONIDAE), A PARASITE OF APORIA CRATAEGI (L.) (LEP. PIERIDAE). (GE ) H Wilbert

# ENTOMOLOGY

911-69

*Entomophago* 5(3):183-211 REF

1960 421 EN835

Apanteles pieridis, Aporia crataegi, Hymenoptera, Insect behavior, Lepidoptera, Parasitism. English summary

911-69

THE GENUS TYPOPSILOPA CRESSON IN THE WESTERN HEMISPHERE (DIPTERA: EPIHYDRIDAE).

W W Wirth

*Entomol Soc Wash Proc* 70(3):225-237

Sep 1968 420 W27

Diptera, Insect anatomy, Typopsilopa, Zoogeography.

912-69

BIOASSAY DETERMINATION OF AIRCRAFT SWATHS AND RICE CANOPY PENETRATION BY LOW VOLUME INSECTICIDAL SPRAYS AT COLUSA, CALIFORNIA.

D J Womeldorf P A Gillies

*Down Earth* 24(2,FALL):23-27

1968 381 D75

Aerial spraying, Biological assay, Chemical control (insects), Culicidae, Diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate, O,O d, Insecticide application, Measurement, Rice, Water analysis, Water treatment.

913-69

AN ABNORMAL INTERMEDIATE FORM OF DACTYNOTUS (D.) HYPOCHOERIDIS H.R.L. (HEMI., APHIDIDAE).

C S Wood-Baker

*Entomol Man Mag (SER 4)*99(277-9, JAN-MAR):38-39

1963 421 EN86

Anatomy, Cuticle, Dactynotus hypochoeridis, Insect abnormalities, Insect identification, Research, Surveys.

914-69

INTERACTIONS BETWEEN THE GRAIN BEETLES SITOPHILUS GRANARIUS (L.) (CURCULIONIDAE) AND PTINUS TECTUS BOIELD. (PTINIDAE).

G E Woodroffe

*Entomol Man Mag (SER 4)*99(277-9, JAN-MAR):36-38

1963 421 EN86

Eggs, Environment, Grain, Insect pests, Morphology, Mortality, Ptinus tectus, Research, Sitophilus granarius, Storage.

915-69

POLYHEDRAL PRE-VIRAL GENOME CONTAINING GENES SYNTHESIZING DEOXYRIBONUCLEASE AND PROTEASE.

K Yamafuji

*Entomophaga Mem Hars Ser* (2):377-381 REF

1964 421 EN835M

Bombyx mori, Cells, Chromosomes, Deoxyribonucleases, Genes, Insect diseases, Mutation, Polyhedroses, Proteinases. French summary.

916-69

REPRODUCTIVE BEHAVIOR AND SOCIAL ORGANIZATION IN THE COLEOPTERA.

F N Young

*Ind Acad Sci Proc* 77:213

1968 500 IN2

Coleoptera, Insect behavior, Pheromones, Social insects.

917-69

STUDY OF THE CORPUS LUTEUM IN INSECT OVARIES BY FLUORESCENCE MICROSCOPY.

I A Yurgenson V S Tcplykh

*Entomol Rev* 46(2,APR-JUN):174-178 REF

Jun 1967 421 R322AE

Corpus luteum, Fluorescence microscopy, Histology, Insect vectors, Ovaries.

918-69

THE PARASITE COMPLEX OF THE EUROPEAN AND NORTH-AMERICAN PINE ROLLER MOTH (CHORISTONEURA spp., LEP. TOR-

# BIBLIOGRAPHY

TRICIDAE), FROM A BIO-GEOGRAPHICAL POINT OF VIEW. (GE)  
H Zwölfer  
*Z Angew Entomol* 61(4):448-452  
May 1968 421 Z36  
Braconidae, Choristoneura, Ichneumonidae, Parasitic insects, Zoogeography.

## GENETICS

919-69  
CHROMOSOMAL POLYMORPHISM IN DROSOPHILA TETRACHAETA.  
D S Angus  
*J Hered* 59(5,SEP-OCT):289-296 MAP REF  
1968 442.8 AM3

Chromosomes, Drosophila, Insect genetics, Larvae, Polymorphism, Population, Salivary glands.

920-69  
EVOLUTION OF FITNESS, III. IMPROVEMENT OF FITNESS IN IRRADIATED POPULATIONS OF DROSOPHILA SERRATA.  
F J Ayala  
*Nat Acad Sci Proc* 58(5):1919-1923 REF  
Nov 1967 500 N21P

Drosophila serrata, Environment, Insect adaptation, Insect genetics, Insect mutation, Irradiation.

921-69  
THE SIGNIFICANCE OF PUFFING IN THE GIANT CHROMOSOMES OF DIPTERA. IN: EXPERIMENTAL EMBRYOLOGY TO MOLECULAR BIOLOGY. EDITED BY E. WOLFF. (FR )  
W Beermann  
43-65 REF PARIS, DUNOD

1967 OH431.W6  
Actinomycins, Chromosomes, Cytology, Deoxyribonucleic acid, Diptera, Histones, Insect genetics, Proteins, Ribonucleic acid.

922-69  
MASS PREPARATION OF NUCLEI FROM THE LARVAL SALIVARY GLANDS OF DROSOPHILA HYDEI.  
J B Boyd H D Berendes H Boyd

*J Cell Biol* 38(2):369-376 REF  
Aug 1968 442.8 J828  
Cell nucleus, Chromosomes, Drosophila hydei, Salivary glands (insects).

923-69  
THE GENETIC EFFECTS OF COFFEE IN DROSOPHILA MELANOGASTER.  
A M Clark E G Clark

*Mutatian Res* 6(2,SEP-OCT):227-234 REF  
1968 443.8 M98  
Caffeine, Chromosomes, Drosophila melanogaster, Food, Insect genetics, Mutation.

924-69  
THE FUNCTION OF THE LAMPBRUSH LOOPS FORMED BY THE Y CHROMOSOME OF DROSOPHILA HYDEI IN SPERMATOCYTE NUCLEI.  
O Hess

*Z Vererbungslehre* 103(1):58-71  
27 Nov 1968 442.8 Z34  
Chromosomes, Drosophila, Fertility, Insect genetics, Spermatogenesis.

925-69  
FINE STRUCTURE ANALYSIS OF A CHROMOSOME SEGMENT IN DROSOPHILA MELANOGASTER. ANALYSIS OF X-RAY-INDUCED LETHALS.  
E Lifschitz R Falk

*Mutatian Res* 6(2,SEP-OCT):235-244 REF  
1968 443.8 M98  
Alleles, Chromosomes, Drosophila melanogaster, Insect genetics, Insect histology, Mutation, X-rays.

926-69  
DROSOPHILA AND PSEUDEUCOILA V: CONTRIBUTION TO THE BIOLOGICAL

PARASITOLOGY OF PSEUDEUCOILA BOCHEI WELD (CYNIPIDAE, HYMENOPTERA) AND REPORT ON TWO NEW MUTANTS. (GE)  
A Meier-Grassmann  
*Rev Suisse Zool* 74(2):409-438 REF  
Sep 1967 410 R324  
Drosophila melanogaster, Insect behavior, Insect genetics, Insect mutation, Irradiation, Parasitic insects, Pseudeucoila bochei. English and French abstracts.

927-69  
GENETIC VARIABILITY IN THE GERMAN COCKROACH. IV. LINKAGE STUDIES WITH MARKERS FOR GROUPS III AND VIII.  
M H Ross D G Cochran  
*J Hered* 59(5,SEP-OCT):318-320 REF  
1968 442.8 AM3  
Aging, Blattella germanica, Blattidae, Breeding, Cytogenetics, Experimental insects, Insect genetics, Mutation.

928-69  
POST-FERTILIZATION EFFECT OF INCOMPATIBILITY FACTORS IN MORMONIELLA.  
S L Ryan G B Saul  
*Z Vererbungslehre* 103(1):29-36  
27 Nov 1968 442.8 Z34  
Insect genetics, Insect mutation, Pteromalidae, Sex ratios.

929-69  
POLYSOMY IN CHROTOGONUS TRACHYPTERUS (BLANCHARD) (ORTHOPTERA: ACridoidea: PYGOMORPHIDAE) FROM THREE MORE POPULATIONS AND ITS POSSIBLE ROLE IN ANIMAL SPECIATION.  
G P Sharma M L Gupta G S Randhawa  
*Panjab Univ Res Bull (N s)*18(PT 1-2):157-163 REF  
Jun 1967 513 EA72  
Chromosomes, Chrotononus, Insect abnormalities, Insect genetics.

930-69  
REPAIR OF DOMINANT LETHAL DAMAGE INDUCED BY X-RAYS IN IMMATURE OOCYTES OF DROSOPHILA MELANOGASTER.  
H Traut P Schmidt  
*Int J Radiat Biol* 13(5):405-415 REF  
19 Jun 1968 444.8 IN8  
Chromosomes, Drosophila melanogaster, Insect genetics, Oogenesis, Statistical analysis, X-rays.

931-69  
THE INFLUENCE OF SELECTION AND MATING SYSTEMS ON LARVAL WEIGHT IN TRIBOLIUM.  
S P Wilson P V Blair W H Kyle A F Bell  
*J Hered* 59(5,SEP-OCT):313-317  
1968 442.8 AM3  
Biological control (insects), Breeding, Heredity, Insect genetics, Insect physiology, Larvae, Mutation, Temperature, Tribolium castaneum.

932-69  
A REFINED TEST FOR X-RAY INDUCED DOMINANT LETHALS IN DROSOPHILA.  
F E Wurgler U Petermann H Ulrich  
*Experientia* 24(12):1293-1294  
15 Dec 1968 475 EXT  
Drosophila, Insect genetics, Irradiation, Lethal factor.

## MEDICAL ENTOMOLOGY

933-69  
NEW DIRECTIONS IN MOSQUITO CONTROL.  
J E Burgoyne  
*Down Earth* 24(2,FALL):38  
1968 381 D75  
Aircraft, Chemical control (insects), Culicidae, Insecticide application, Public health, Research, Rice.

934-69

REPORT ON A LIMITED ANOPHELINE SURVEY AT IFAKARA, SOUTH-EASTERN TANZANIA.

T A Freyogel P M Kihale

*Acta Trop* 25(1):17-28 MAP REF

1968 475 AC8

Anophelis, Insect ecology, Insect vectors, Malaria, Surveys. French and German abstracts

935-69

A REFINEMENT IN AERIAL APPLICATIONS OF PARIS GREEN GRANULES.

T O Fultz F Harris

*Mosquito News* 28(3):323-326

Sep 1968 421 M85

Aedes sollicitans, Aerial insect control, Aircraft, Chemical control (insects), Insect control, Methodology, Organic compounds.

The author discusses the techniques used in the aerial application of paris green granules in Georgia for mosquito control.

936-69

ORGANIZATION FOR EFFECTIVE MOSQUITO CONTROL PROGRAMS.

R W Rings

*Ohio Agr Exp Sta Dep Zool Ent Publ Ser (SER 31):4P*

Oct 1967 100 OH3PU

Accident prevention, Culicidae, Economics, Insect control, Surveys.

937-69

THE UNITED STATES AND MALARIA: DEBITS AND CREDITS.

P F Russell

*N Y Acad Med Bull (SER 2)44(6):623-653* REF

Jun 1968 448.9 N48

Anopheles quadrimaculatus, Chemical control (insects), DDT, Economics, History, Insect vectors, Insecticide resistant insects, Larvicides, Malaria control, Plasmodium.

## CROP PROTECTION

938-69

FENCE POSTS USED TO EVALUATE PRESERVATIVES.

*Can Dep Forest Forest Prod Res Br Res News* 11(6,NOV-DEC).

1968 99.9 C1625F

Evaluation, Lumber preservatives, Research, Wood durability.

939-69

FOREST INSECT AND DISEASE SURVEY.

*Can Dep Forest Forest Prod Res Br Res News* 11(6,NOV-DEC):

1968 99.9 C1625F

Chermes piceae, Choristoneura fumiferana, Choristoneura pinus, Dieback, Forest conservation, Forest insects, Insect collection, Scleroderris, Surveys, Ulmus, Wood-destroying insects.

940-69

DETRIMENTAL EFFECT OF RUSSIANTHIALE ON SEMIDESERT RANGE IN WEST-CENTRAL NEW MEXICO.

E F Aldon

*Pacific Southwest Forest Range Exp Sta Res Note PSW-109:1-2*

1968 A99.9 F7632US

Environment, Perennial plants, Research, Salsola kali, Soil structure.

941-69

CULTIVATED PALMS OF VENEZUELA.

A Braun

*Principes* 12(2-3,APR-JUL):39-103 MAP

1968 80 P932

Climate, Economic plants, Humidity, Palmae, Plant adaptation, Plant diseases, Plant injuries, Plant taxonomy, Surveys. To be continued.

942-69

THE ANALYSIS OF RESPONSE IN CROP AND LIVESTOCK PRODUCTION.

J L Dillon

*135P REF OXFORD, PERGAMON PRESS*

1968 S566.D5

Agricultural production economics, Crops, Experimental design, Livestock, Mathematical analysis, Productivity, Statistical analysis, Time.

943-69

CHANGES IN USAGE OF PLANT PROTECTION PREPARATIONS DURING THE LAST FIFTEEN YEARS. (GE )

H Drzes

*Gesunde Pflanzen* 19(12):244-248

Dec 1967 464.8 G33

Creosote, DDT, Fungicides, Herbicides, Insecticides, Mineral oil, Plant protection.

944-69

1966 PLANT INSPECTION STATISTICS. (GE )

R Finkbein

*Gesunde Pflanzen* 19(12):252-254

Dec 1967 464.8 G33

Agricultural statistics, Foreign trade, Legislation, Pest control, Plant diseases, Plant protection, Tables (data).

945-69

EXTENT OF FARM PESTICIDE USE ON CROPS IN 1966.

A Fox T Eichers P Andrilena R Jenkins H Blake

*USDA Agr Econ Rep (147):2-23* MAP

Oct 1968 A281.9 AG8A

Agricultural outlook, Agricultural policies, Crops, Methodology, Pesticides, Surveys, Tables (data).

946-69

BIBLIOGRAPHY OF BIOLOGICAL CONTROL. VII.

J M Franz

*Entomophaga* 8(2):161P REF

1963 421 EN835

Arthropoda, Bibliography, Biological control (pests), Reference materials, Weeds. The bibliography, introduction, text, and title are in German and French as well as English.

947-69

PERSISTANCE OF DIVERSE ALFALFA VARIETIES UNDER GRAZING.

E Gray J S Rice A J Hester

*Tenn Farm Home Sci (67,JUL-SEP):21-24*

1968 100 T25F

Alfalfa, Crop rotation, Crop varieties, Crop yields, Feeding, Grazing, Plant hardiness.

948-69

INTEGRATED PEST CONTROL FROM THE POINT OF VIEW OF ZOOLOGICAL PESTICIDE EXAMINATION. (GE )

W Herfs

*Anz Schadlingskunde* 41(9):132-134 REF

Sep 1968 421 AN9

Biochemistry, Chemical control (pests), Integrated control (pests), Pesticides, Plant protection, Research, Zoology. English and French summary.

949-69

STUDIES ON THE RESPIRATION RATE IN THE DIFFERENT PARTS OF THE ROOT SYSTEMS OF PINE AND SPRUCE SEEDLINGS AND ITS VARIATIONS DURING THE GROWING SEASON.

E Lahde

*Acta Forest Fenn* 81:1-24 REF

1967 99.9 F492

Coniferae, Picea, Pinus, Plant nutrition, Plant physiology, Plant respiration, Roots, Seedlings, Tables (data), Warburg apparatus.

950-69

VERTICAL DISTRIBUTION OF BIOLOGICAL ACTIVITY IN PEAT OF SOME VIRGIN AND DRAINED SWAMP TYPES.

E Lahde

*Acta Forest Fenn* 81:1-15 REF

1967 99.9 F492

Cellulose, Decomposition, Drainage, Gases, Oxidation-reduction potential, Peat, Soil analysis, Swamps, Tables (data), Warburg apparatus.

951-69

ON THE PRECISION OF SOME METHODS OF FOREST INVENTORY.

A Nyysonen P Kilkki E Mikkola

*Acta Forest Fenn* 81:1-58 MAP REF

1967 99.9 F492

Forest management, Forest surveys, Sampling (statistics), Tables (data). Finnish summary.

952-69

A GUIDE TO THE USE OF PESTICIDES FOR THE CONTROL OF AGRICULTURAL PESTS.

B K Petty J Bot N Hollings

*79P PRETORIA, SOUTH AFRICA, DEPT. OF AGRICULTURAL TECHNICAL*

Jun 1967 SB961.P4

Accident prevention, Agriculture, Pest control, Pesticide application, Pesticide residues, Pesticides, Plant protection.

953-69

NITROGENOUS AND PHENOLIC COMPOUNDS OF NICOTIANA PLANTS. II. SELECTIVE INCORPORATION OF AROMATIC AMINO ACIDS IN PHENOLIC COMPOUNDS OF TUMOROUS NICOTIANA HYBRIDS.

T C Tso T P Sorokin H Chu G W Schaeffer L G Burk

*Acad Sinica Bot Bull (N s)8:231-237*

Oct 1967 451 AC1B

Amino acids, Chemicals, Nicotiana glauca, Nicotiana langsdorffii, Nitrogen compounds, Phenols, Plant galls, Tissues.

954-69

PHYSIOLOGY OF PARASITISM. 2. BIOCHEMICAL CHANGES IN THE MUNG BEAN SEEDLING INFECTED WITH RHIZOSPONIA SOLANI KUEHN.

L C Wu

*Acad Sinica Bot Bull (N s)8:271-283* REF

Oct 1967 451 AC1B

Biology, Chemistry, Mung beans, Nucleic acids, Parasitism, Plant physiology, Rhizosponia solani, Seedlings. Japanese summary

955-69

EXPRESS METHOD OF DISINTEGRATION OF ASPERGILLUS AWAMORI CONIDIA. (RUS )

P N Yevtikov

*Priklad Biokhim Mikrobiol Akad Nauk SSSR* 3(6):665-666

1967 385 P93

Aspergillus awamori, Conidia, Equipment, Fungi, Methodology. English summary.

956-69

THE ACCUMULATION OF GROWTH REGULATORS IN PLANT INFECTED BY NECTRIA PTEROSPERMI SAW.

P H Yu L C Wu C C Chen

*Acad Sinica Bot Bull (N s)8:316-326* REF

Oct 1967 451 AC1B

Chromatography, Extracts, Fungus diseases (plants), Nectria pterospermi, Plant protection, Plant regulators. Japanese summary

## DISEASES

957-69

SURVEY OF DECAY AND STAIN IN SUGAR MAPLE IN THE MARITIMES.

*Can Dep Forest Forest Prod Res Br Res News* 11(6,NOV-DEC).

1968 99.9 C1625F

Basidiomycetes, Forest conservation, Forest surveys, Hardwoods, Staining, Wood decay, Wood destroying fungi.

958-69

PRODUCTION OF EXTRACELLULAR ENZYMES BY PHYTOPHTHORA PALMIVORA (BUTL.) BUTL..

O A Akinrefon

*J Gen Microbiol 51(PT 1):67-74* REF

Apr 1968 448.3 J823

Chemical analysis, Culture media, Enzymes, Fungus diseases (plants), Nutrition, Phytophthora palmivora.

959-69

LATE BLIGHT DISEASE ON POTATOES AND ITS CONTROL.

H K Alva

*Lal-Baugh 12(3 JUL-SEP):31-32*

1967 80 L15

Bordeaux mixture, Fungus diseases (plants), Late blight, Phytophthora infestans, Plant protection, Potatoes, Symptomatology, Zineb, Ziram.

960-69

STUDIES ON THE MODE OF ACTION OF TOMATINE AS A FUNGITOxic AGENT.

P A Arneson R D Durbin

*Plant Physiol 43(5):683-686* REF

May 1968 450 P692

Biochemistry, Cholesterol, Colletotrichum, Fungotoxicity, *Helminthosporium turicum*, Septoria, Tomatine, Toxicology.

961-69

THE HEALTHY JUICE EFFECT IN VIRUS TRANSMISSION.

S Azeem C E Yarwood

*Pakistan J Sci Indus Res 10(3):227-228*

Jul 1967 475 P174

Bentonite, Cucumbers, Extracts, Plant tissues, Ring spot, Tomatoes, Virus diseases (plants).

962-69

DUTCH ELM DISEASE RECURRENCE AND RECOVERY IN AMERICAN ELM.

W M Banfield

*Mass Agr Exp Sta Bull (568):60P* REF

1968 100 M38H (1)

Ceratocystis ulmi, Dieback, Epidemiology, Fungus diseases (plants), Plant histology, Scolytidae, *Ulmus americana*, Weather. German summary

963-69

CLASSIFICATION OF STRAINS OF THE GROUP BACILLUS THURINGIENSIS THROUGH DETERMINATION OF THE FLAGELLAR ANTIGEN. 2. (FR)

A Bonnefond H dc Barjac

*Entomophaga 8(3):223-229*

1963 421 EN835

Agglutination test, Antigens, *Bacillus thuringiensis*, Biochemistry, Serological tests. English summary.

964-69

DISINFECTION OF POTATOES WITH MANEB AND MAGNESIUM. COMPARATIVE EFFECT OF MANEB AND MAGNESIUM SULFATE IN THE YIELD OF CAIRO POTATO AT THE EXPERIMENTAL SUBSTATION AT LA SELVA. (SP)

J J Castano A H D Thurston

*Agr Trop 24(7):407-408*

Jul 1968 26 AG8

Chemical control (plant diseases), Crop yields, Maneb, Mangancsc, Phytophthora infestans, Potatoes.

965-69

CONTROL OF THE GOTAS OF TOMATOES. ASPERSION OF MANEB IN TOMATOES AT DISTINCT WEEKLY INTERVALS AND LEVELS OF RAIN FOR THE CONTROL OF PHYTOPHTHORA INFESTANS. (SP)

J J Castano A H D Thurston

*Agr Trop 24(5):262-264*

May 1968 26 AG8

Chemical control (plant diseases), Fungus diseases (plants), Maneb, Phytophthora infestans, Tomatoes.

966-69

THE EFFECT OF ADHESIVE PROTECTIVE APPLICATIONS COMBINED WITH MANEB TO CONTROL PHYTOPHTHORA INFESTANS OF POTATOES. (SP)

J J Castano A H D Thurston

*Agr Trop 24(4):223-225*

Apr 1968 26 AG8

Adhesives, Chemical control (plant diseases), Maneb, Phytophthora infestans, Potatoes.

967-69

INVESTIGATIONS ON DISEASE COMPLEX OF RICE IN WEST BENGAL (INDIA). I. STUDY OF RHIZOSPHERE MICROFLORA OF THE AFFECTIONED PLANTS.

S B Chattopadhyay N Mukhopadhyay

*Int Rice Comm News Lett 16(1):31-37*

Mar 1967 59.9 IN83N

Bacterial diseases (plants), Growth factors, Microflora, Plant diseases, Plant physiology, Plant regulators, Rhizosphere, Rice, Soil properties, Tables (data).

968-69

THE TRANSFER OF BLUE MOLD RESISTANCE TO TOBACCO FROM NICOTIANA DEBNEYI. PART IV. BREEDING PROGRESS 1957-1967.

E E Clayton

*Tobacco 167(1):25-34*

05 Jul 1968 286.89 T552

Downy mildew, Fungus diseases (plants), Nicotiana debneyi, Plant breeding, Plant disease resistance, Plant genetics, Plant morphology, Tobacco.

969-69

POSSIBILITIES FOR INTER- AND INTRACELLULAR TRANSLOCATION OF SOME ICOSAHEDRAL PLANT VIRUSES.

G A De Zoeten G Gaard

*J Cell Biol 40(3):814-823* REF

Mar 1969 442.8 J828

Beans, Electron microscopy, Mosaic, Plant cytology, Plant disease transmission, Ring spot, Tomatoes, Virus diseases (plants).

970-69

COMPETITION AND SYNERGISM BETWEEN CHOLESTEROL AND CHOLESTANOL IN OOSPORE FORMATION IN PHYTOPHTHORA CACTORUM.

C G Elliott

*J Gen Microbiol 51(PT 1):137-143* REF

Apr 1968 448.3 J823

Cholestanol, Cholesterol, Oospores, Phytophthora cactorum.

971-69

STUDIES ON FUNGITOxicITY OF A COPPER BASED COMPOUND S-3.

S S Husain S A Hasan M Yousaf G M Ali

*Pakistan J Sci Indus Res 10(3):197-200* REF

Jul 1967 475 P174

Alternaria tenuis, Copper, Fungicides, Fungotoxicity, Fungus diseases (plants), Fusarium, *Helminthosporium*.

972-69

FRUIT SYMPTOMS IN LEAF SPOT OF SWEET CHERRIES. (GE)

W Kampe

*Gesunde Pflanzen 19(2):250-251*

Dec 1967 464.8 G33

Cherries, Leaf spot, Mazzard cherries, Plant diseases, Plant ecology. English summary.

973-69

THE SOD INDUSTRY'S BOOM IS BUSTING.

R Lehnert

*Michigan Farmer 250(11):38-39*

Dec 1968 6 M58

Crop losses, Fungus diseases (plants), Fusarium, Turf. Includes discussion of a blight caused by Fusarium.

974-69

A CONTRIBUTION TO THE FIGHT AGAINST THE GENUINE CARROT RUST FLY (PSILA ROSAE FABR.) WITH LIQUID SPRAYS AND GRANULAR INSECTICIDES. (GE)

H F Lichte

*Gesunde Pflanzen 20(8):157-160*

Aug 1968 464.8 G33

Carrots, Diazinon, Dusting, Formulations, Psila rosae, Spraying.

975-69

DISEASES OF CITRUS TREES. (SP)

M Mofica B

*Agr Trop 24(2):117-121*

Feb 1968 26 AG8

Bacterial diseases (plants), Citrus, Fungus diseases (plants), Plant disease control, Plant nematodes, Virus diseases (plants).

Symptoms and means for control of bacteria, fungi, nematodes, virus and physiological diseases of citrus trees are discussed.

976-69

NOTE: OOSPORES OF SCLEROSPORA PHILIPPINENSIS WESTON FROM CORN LEAF TISSUE.

G Napi-Acedo O R Exconde

*Philippine Agr 51(4):279-282*

Sep 1967 25 P542

Corn, Cytology, Downy mildew, Fungus diseases (plants), Oospores, Sclerospora.

977-69

ON DIAPORTHE ON PLUM-TREES - A STUDY OF LITERATURE. (SW)

K Olsson

*Swed Stat Vaxtskyddsanst Medd 14(117):51-63* REF

1968 464.9 SW3M

Diaporthe, Fungus diseases (plants), Literature, Parasitism, Plums, Research, Trees. English summary

978-69

PIPECOLIC ACID AS AN INDICATOR OF ABNORMAL PROTEIN METABOLISM IN DISEASED PLANTS.

G Palfi L Deszi

*Plant Soil 29(2):285-291* REF

Oct 1968 450 P696

Blast, Chromatography, Leaf roll, Mosaic, Pipecolic acid, Plant diseases, Plant metabolism, Potatoes, Proteins, Rice, Soybeans, Tobacco.

979-69

ON THE METHODS OF THE STUDY OF CHEMICAL-PROPERTIES OF CELLULAR WALLS IN PHYTOPATHOGENIC FUNGI. (RUS)

M N Pirtskhalaishvili G A Makashvili N A Lomtadze

*Sel'skokhazyast Bial 3(4):585-586*

1968 S13.S44

Cell wall, Cells, Chemistry, Fungi, Phytopathogenic fungi.

980-69

POTATO CULTIVATION IN MYSORE STATE.

B Rajanna T Raja

*Lal-Baugh 12(3 JUL-SEP):5-11*

1967 80 L15

Food plants, Fungus diseases (plants), Insect pests, Nematodes, Plant protection, Potatoes, Virus diseases (plants). Listing of potato diseases, pests and their control.

981-69

FIXATION OF CARBON DIOXIDE IN THE DARK BY THE MALIC ENZYME OF BEAN AND OAT STEM RUST UREDOSPORES.

P D Rick C J Mirocha

*Plant Physiol 43(2):201-207* REF

Feb 1968 450 P692

Beans, Biochemistry, Carbon dioxide, Enzymes, Fungus diseases (plants), Oats, Spores, Stem rust.

982-69  
METABOLIC REGULATION IN DISEASED LEAVES. II. CHANGES IN NICOTINAMIDE NUCLEOTIDE COENZYMES IN BARLEY LEAVES INFECTED WITH POWDERY MILDEW.  
I J Ryrie K J Scott  
*Plant Physiol* 43(5):687-692 REF  
May 1968 450 P692  
Barley, Coenzymes, Nicotinamide, Plant biochemistry, Plant metabolism, Powdery mildew.

983-69  
STUDIES ON THE MICROFUNGI IN THE FOREST FLOOR OF SUBARCTIC PINE FORESTS.  
I Schalin  
*Acta Forest Fenn* 81:1-18 REF  
1967 99.9 F492  
Cellulose, Forest conservation, Fungi, Humus, Microbiology, Mucor, Penicillium, Pinus, Population, Soil analysis, Tables (data), Trichoderma.

984-69  
STREPTOMYCIN RESISTANCE AND MORPHOLOGICAL VARIATION IN PHYTOPHTHORA CACTORUM.  
D S Shaw C G Elliott  
*J Gen Microbiol* 51(PT 1):75-84 REF  
Apr 1968 448.3 J823  
Drug resistance, Morphology, Mutation, Phytophthora cactorum, Streptomycin.

985-69  
THE DEATH AND DECAY OF TREES.  
A Shigo  
*Natur Hist* 78(3):42-47  
Mar 1969 500 N483J  
Bacteria, Hardwoods, Plant decay, Plant diseases, Plant injuries, Wood destroying fungi.

986-69  
VIRUS LEAF SPOT IN GRAPE PLANTS. (RUS )  
P M Sterenberg B N Milkus M I Kusheleva  
*Sel'skokhozyast Biol* 3(4):576-581 REF  
1968 S13.S44  
Chlorosis, Grapes, Leaf spot, Plant diseases, Serological tests, Virus diseases (plants). English summary

987-69  
A NONINFECTIOUS LETHAL LEAF SPOT IN MAIZE.  
A J Ullstrip A F Troyer  
*Ind Acad Sci Proc* 77:128  
1968 500 IN2  
Corn, Genes, Leaf spot, Plant genetics, Plant mutation.

988-69  
THE ROLE OF CALCIUM AND CELL PERMEABILITY IN THE DISEASE BLOSSOM-END ROT OF TOMATOES.  
B J Van Gool  
*Physiol Plant* 21(5):1110-1121 REF  
20 Sep 1968 450 P564 (1)  
Blossom end rot, Calcium, Cell wall, Plant cytology, Plant physiology, Tomatoes.

989-69  
BLIND SEED DISEASE OF RYEGRASS.  
C E Wright  
*Euphytica* 16(1):122-130 REF  
Feb 1967 450 EU6  
Blind seed disease (loliium perenne), Breeding, Fungus diseases (plants), Gloeotinia temulenta, Lolium, Plant diseases, Seed germination.

990-69  
STEM WEEVIL THE PREY FOR TINY WASP.  
Anonymous  
*New Zeal J Agr* 116(3):63  
Mar 1968 23 N48J

991-69  
SOUTH AMERICAN SEARCH FOR GRASS-GRUB SOLUTION.  
Anonymous  
*New Zeal J Agr* 116(2):57  
Feb 1968 23 N48J  
Biological control (insects), Hepialidae, Insect control, Scarabacidae.  
The biological control of grassgrubs and porina caterpillars in South American pastures is discussed. Four species of parasitic insects from South America have been unsuccessfully introduced to New Zealand to decrease their biotic potential.

992-69  
THE MITE BATTLE GOES ON AND ON.  
D Asquith  
*Amer Fruit Grower* 89(2):18  
Feb 1969 80 G85  
Acaricides, Apples, Chemical control (pests), Fruit, Insect control, Mites, Pesticides, Plant pest resistance, Research, Temperature.

993-69  
THE CONTRIBUTION OF INSECT CONTROL TO HIGH YIELDS OF RICE.  
R F Chandler  
*Entomol Soc Amer Bull* 14(2):133-135  
Jun 1968 423.9 EN8  
Chilo suppressalis, Crop yields, Insect control, Insecticides, Rice, Sesamia inferens, Toxicology, Tryporyza incertulas, Tryporyza innotata.

994-69  
OPERATIONAL RESEARCH INTO AERIAL CONTROL OF HOPPERS OF THE RED LOCUST (NOMADACRIS SEPTEMFASCIATA SERVILLE) IN AN OUTBREAK AREA.  
G J W Dean A R W Crosse-Upcott  
*Entomol Soc Southern Afr J* 31(1):61-74 MAP REF  
Mar 1968 420 EN86  
Aerial insect control, Chemical control (insects), Dieldrin, Dinitrocresol, Insect migration, Insecticides, Nomadacris septemfasciata.

995-69  
CYPRESS BARK MOTH ON MONTEREY CYPRESS.  
G W Frankie C S Koehler  
*Calif Agr* 21(1):6-7  
Jan 1967 100 C12CAG  
Coryneum cardinale, Cupressus macrocarpa, Fungus diseases (plants), Insect pests, Larvae, Laspeyresia cupressana, Moths.

996-69  
INFESTING ORANGES WITH LARVAE OF THE FALSE CODLING MOTH, LEPIDOPTERA: CRYPTOPHLEBIA LEUCOTRETA (MEYR.).  
M B Georgala  
*Entomol Soc Southern Afr J* 31(2):291-296  
Sep 1968 420 EN86  
Cryptophlebia leucotreta, Larvae, Oranges.

997-69  
DAMAGE TO FIELD CORN BY SYMPHYLANS.  
G E Gould C A Edwards  
*Ind Acad Sci Proc* 77:214-221 REF  
1968 500 IN2  
Chemical control (insects), Corn, Crop losses, Roots, *Scutigerella immaculata*.

998-69  
THE INFLUENCE OF DBCP ON THE SOIL FAUNA IN AZALEA CULTURE.  
A Heungens  
*Pedobiologia* 8(3):281-288 REF  
1968 56.8 P343  
Azalea, Chemical control (insects), DBCP, Greenhouses, Nematocides, Soil fauna.

999-69  
STUDIES ON THE WOOLY BEECH SCALE CRYPTOCOCCUS FAGI BAER (INSECTA, COCCINA), A REPRESENTATIVE BARK-SUCKER. (GE )  
H Kunkel  
*Z Angew Entomol* 61(4):373-379 REF  
May 1968 421 Z36  
Bark, *Cryptococcus fagi*, Insect pests, Plant physiology, Population, Tree injuries. English summary.

1000-69  
NATURAL REGULATION AND ARTIFICIAL CONTROL OF BROWN LOCUST NUMBERS.  
A Lea  
*Entomol Soc Southern Afr J* 31(1):97-112 MAP REF  
Mar 1968 420 EN86  
Demography, Grasshoppers, Insect ecology, Natural control (insects).

1001-69  
THE ALFALFA WEEVIL LIKES OUR STATE .  
R Lehner  
*Michigan Farmer* 250(11):23-25  
Dec 1968 6 M58  
Alfalfa, Azinphosmethyl, Chemical control (insects), Chlorinated hydrocarbons, Diazinon, Hypera postica, Insect biology, Insecticides, Malathion, Methoxychlor, Methyl parathion, Organophosphorus compounds, Spraying.

1002-69  
A MITE OF THE GENUS TYDEUS (ACARIFORMES, TYDEIDAE) THAT IS A GRAPE PEST IN MOLDAVIA.  
N I Mal'chenkova  
*Entomol Rev* 46(1 JAN-MAR):66-68  
Mar 1967 421 R322AE  
Acarina, Grapes, Insect morphology, Insect physiology, Plant injuries.

1003-69  
ASPECTS OF THE BIONOMICS OF DACUS CILIATUS LOEW (DIPTERA: TRYPETIDAE). (AF )  
E M Malan J H Giliomee  
*Entomol Soc Southern Afr J* 31(2):373-389 REF  
Sep 1968 420 EN86  
Cucurbitaceae, Dacus, Insect biology, Longevity. English abstract

1004-69  
INVESTIGATIONS OF THE POPULATION FLUCTUATIONS OF OSCINELLA FRIT. (ABSTRACT). (GE )  
K Mayer  
*Z Angew Entomol* 61(4):395-396  
May 1968 421 Z36  
Grain, Grasses, Insect ecology, Oscinella frit, Plant physiology, Population, Temperature. Full text will be published in Deutsche Entomologische Zeitschrift.

1005-69  
ENTOMOLOGICAL ASPECTS OF THE CITRUS TREE IN COLOMBIA. (SP )  
M Mojica B  
*Agr Trop* 24(5):281-288 REF  
May 1968 26 AG8  
Catalogs, Chemical control (insects), Citrus, Cultural control (insects).  
Chemical, cultural, biological and legislative control of insect pests of the citrus industry of Colombia.

1006-69  
THE DAMAGE BROUGHT ABOUT BY PHLOEOTRIBUS. (FR )  
A Morettini  
*Inform Oleicoles Inter (N S 42, APR-JUN):65-72*  
1968 80 IN3  
Aldrin, Benzene hexachloride, Chemical control (insects), Chlordane, Coleoptera, DDT, Insect biology, Insecticides, Liothrips oleae, Olives, Phloeotribus.

## ARTHROPODS

1007-69  
INVESTIGATIONS INTO THE ECOLOGY OF THE COLEOPTERA FAUNA OF COASTAL CULTIVATED LAND NEAR GREIFSWALD. PART I. THE CARABID FAUNA ADJACENT TO FIELDS AND PASTURES WITH INTERMEDIATE FIELD BORDERS. (GE)  
G Muller  
*Pedobiologia* 8(3):313-339 MAP REF  
1968 56.8 P343  
Carabidae, Demography, Groundwater, Habitats, Natural control (insects), Sex ratios. English abstract

1008-69  
THE HARVESTER TERMITE, HODOTERMES MOSSAMBIICUS (HAGEN), AS A PEST OF NATURAL PASTURE. (AF)  
J J C Nel  
*Entomol Soc Southern Afr J* 31(2):309-321 REF  
Sep 1968 420 EN86  
Chemical control (insects), Crop yields, Dieldrin, Pastures, Termites. English abstract

1009-69  
THE BIOLOGICAL CONTROL OF THE EUROPEAN CORN BORER THROUGH THE USE OF BACTERIA.  
D Nesbitt H L Zimnick  
*Ind Acad Sci Proc* 77:213  
1968 500 IN2  
Bacterial diseases (insects), Biological control (insects), Escherichia coli, Ostrinia nubilalis, Serratia marcescens.

1010-69  
COMPATIBILITY STUDIES ON BACILLUS THURINGIENSIS BERLINAR WITH CHLORINATED HYDROCARBONS.  
M R Rajasekharan R N Pillai N R Rao E  
Dharmaraju  
*Andhra Agr J* 14(5):167-168  
1967 34.2 AN4  
Bacillus thuringiensis, Bacteria, Benzene hexachloride, Carbaryl, Chemical control (insects), Chlorinated hydrocarbons, DDT, Endosulfan, Endrin, Toxicology.

1011-69  
A REVIEW OF LEPIDOPTEROUS PESTS OF CONIFEROUS FORESTS IN THE BAYKAL REGION.  
I A Raygorodskaya  
*Entomol Rev* 46(2, APR-JUN):186-190 REF  
Jun 1967 421 R322AE  
Catalogs, Conifers, Insect pests, Lepidoptera.

1012-69  
BACTERIA INSTEAD OF POISON USED AGAINST THE OAKLEAF ROLLER MOTH, AS A CONTRIBUTION TO BIOLOGICAL PEST CONTROL. (GE)  
J Reisch  
*Z Angew Entomol* 61(4):394  
May 1968 421 Z36  
Bacillus thuringiensis, Biological control (insects), Forest insects, Insect diseases, Insecticides, Tortrix viridana

1013-69  
MASS APPEARANCE OF A TYPICAL PERMANENT FOREST INFESTOR, THE LARCH CASEBEARER (COLEOPHORA LARICELLA). (GE)  
U Schindler  
*Z Angew Entomol* 61(4):380-385 REF  
May 1968 421 Z36  
Chalcidae, Coleophora laricella, Forest insects, Insect outbreaks, Insect pests, Parasitic insects, Weather. English summary.

1014-69  
LEA BEETLES (PHYLLOTRETA SPECIES) AND SUGAR BEETS. (SHORT COMMUNICATION). (GE)  
O Schreier  
*Pflanzenschutzberichte* 35(4/5):59-61  
Mar 1967 464.9 P48

1015-69  
ECOLOGICAL STUDIES ON THE GREEN PEACH APHID, MYZUS PERSICAE (SULZER) AND THE CABBAGE APHID, BREVICORYNE BRASSICAE (LINNAEUS) IN JAPAN, WITH SPECIAL REFERENCE TO THEIR BIOLOGICAL CONTROL.  
M Shiga  
*Mushi* 41(6):75-89 REF  
10 Sep 1967 421 M97  
Biological control (insects), Brevicoryne brassicae, Insect ecology, Insect morphology, Myzus persicae, Zoogeography.

1016-69  
ON THE BIOLOGY AND ECOLOGY OF LYGUS VOSSELERI (HETEROPTERA: MIRIDAE) WITH SPECIAL REFERENCE TO ITS HOST-PLANT RELATIONSHIPS.  
G O Stride  
*Entomol Soc Southern Afr J* 31(1):17-59 REF  
Mar 1968 420 EN86  
Cotton, Grain, Insect ecology, Insect rearing, Miridae.

1017-69  
PHENOMENA IN THE INFESTATION PATTERN OF PHYTOPHAGOUS INSECTS. (GE)  
W Thalenhorst  
*Z Angew Entomol* 61(4):369-372  
May 1968 421 Z36  
Epinotia tedella, Fertilizers, Forest insects, Insect pests, Picea, Pristiphora ambigua, Stand density. English summary.

1018-69  
NOTES ON THE BIOLOGY OF ARTYTAINA SPARTIOPHILA FORSTER AND A. GENISTAE LATREILLE (HOMOPTERA: PSYLLIDAE) ON BROOM (SAROTHAMNUS SCOPARIUS (L.) WIMMER) IN BRITAIN.  
R H Watmough  
*Entomol Soc Southern Afr J* 31(1):115-122  
Mar 1968 420 EN86  
Cytisus, Insect ecology, Life cycle, Psyllidae.

1019-69  
WHITE FIR STANDS KILLED BY TUSSOCK MOTH 70-MM. COLOR PHOTOGRAPHY AIDS DETECTION.  
S L Wert B E Wickman  
*USDA Forest Serv Res Note PSW- 168:1-5*  
1968 A99.9 F7652  
Abies concolor, Aerial photography, Hemerocampa pseudotsugata, Plant protection, Survey, Tree injuries.

1020-69  
ON THE EFFECT OF INDUSTRIAL AIR POLLUTION ON THE NEMATODE POPULATION IN THE SOIL OF PINE GROVES. (GE)  
W Bassus  
*Pedobiologia* 8(3):289-295  
1968 56.8 P343  
Air pollution, Chemical control (nematodes), Nematodes, Pinus, Soil fauna, Sulfur dioxide. English abstract

1021-69  
PRATYLENCHUS THORNEI - A CAUSE OF ROOT NECROSIS IN WHEAT.  
R I Baxter C D Blake  
*Nematologica* 14(3):351-361 REF  
1968 436.8 N342  
Humidity, Necrosis, Pratylenchus thornei, Roots, Wheat.

1022-69  
LOSSES CAUSED BY POTATO CYST EELWORM IN THE ISLE OF ELY.  
E B Brown L J Coppock  
*Great Brit NAAS (Nat Agr Adv Serv) Quart Rev* (8, SUMMER):146-149  
1968 241 G796  
Crop losses, Heterodera rostochiensis, Nematode population, Plant nematodes, Potatoes, Surveys.

1023-69  
THE BIOLOGY OF ROTYLENCHULUS PARVUS.  
D R Dasgupta D J Raski  
*Nematologica* 14(3):429-440 REF  
1968 436.8 N342  
Cotton, Larvae, Plant nematodes, Rotylenchulus parvus, Temperature.

1024-69  
CONTROL OF MELOIDOGENE JAVANICA IN POTATO TUBERS AND M. HAPLA IN THE ROOTS OF YOUNG ROSE BUSHES BY MEANS OF HEATED WATER.  
G C Martin  
*Nematologica* 14(3):441-446  
1968 436.8 N342  
Hot water treatment (plants), Meloidogyne hapla, Meloidogyne javanica, Plant nematodes, Plant pest control, Potatoes, Rosa.

## WEEDS

1025-69  
POISON PLANTS OF WESTERN AUSTRALIA; THE TOXIC SPECIES OF THE GENERA GASTROLOBIUM AND OXYLOBIUM.  
T E H Aplin  
*West Aust J Agr (SER 4)9(8):356-362 MAP*  
Aug 1968 23 W52J  
Gastrolobium, Livestock, Mortality, Oxylobium, Poisonous plants.

1026-69  
SURVEYING THE PRE-EMERGENT CHEMICALS AND IDEAS.  
D Brown  
*Midwest Reg Turf Conf Proc 1968 MEETING:20-22*  
04 Mar 1968 60.19 M58  
Agricultural products, Chemicals, D, 2,4-, Emergence, Herbicides, Surveys, Turf, Weed control. 11 commercial products are discussed.

1027-69  
LAWN WEEDS AND THEIR CONTROL.  
J D Furrer  
*Nebr Univ Ext Ec* 178:23P  
Jun 1968 275.29 N272EX  
Chemical control (weeds), Crop varieties, Herbicides, Lawns, Plant physiology, Weeds.

1028-69  
DWARFMISTLETOE ON BREWER SPRUCE IN OREGON.  
F G Hawksorth D Wiens D P Graham  
*Northwest Sci* 41(1):42-44  
Feb 1967 470 N81  
Arceuthobium, Parasitic plants, Picea breweriana, Tree injuries, Zoogeography.

1029-69  
CANADA THISTLE AND ITS CONTROL.  
J M Hodgson  
*U S D A Leaflet* (523):2-8 MAP  
Sep 1968 1 AG84L  
Accident prevention, Chemical control (weeds), Cirsium arvense, Crop yields, Cultural control (weeds), Herbicides, Integrated control (weeds), Plant injuries, Plant physiology.

1030-69  
BROMACIL TESTED AS AN INJECTION HERBICIDE.  
P J Huffman  
*Tenn Farm Home Sci* (67 JUL-SEP):18-19  
1968 100 T25F  
Bromacil, Chemical control (weeds), Economics, Forest management, Herbicides, Injections, Trees.

**1031-69**  
**PRE-EMERGENCE HERBICIDES FOR WEED CONTROL IN WALNUTS.**  
A H Lange B E Day L S Jordan R C Russell  
*Calf Agr* 21(1):24  
Jan 1967 100 C12CAG  
Diuron, Herbicides, Simazine, Walnuts, Weed control.

**1032-69**  
**BIOLOGICAL METHODS OF WEED CONTROL. TRANSL. 16892.**  
J J Lipa S Pruszkynski  
18 P. REF  
Biological control (weeds), Insects, Methodology, Microorganisms, Mollusks, Plant diseases, Plant physiology, Vertebrates, Weeds. Translation from Postepy Nauk Rolniczych 3(105):69-87, 1967

**1033-69**  
**WATSONIA: (WATSONIA spp. AND CHASMANTHE AETHIOPICA (L.) N. E. BROWN).**  
G R W Meadly  
*West Aust J Agr* 9(8):380-383  
Aug 1968 23 W52J  
Chasmanthe aethiopica, Dalapon, Herbicides, Watsonia, Weed control.

**1034-69**  
**LITTLE NOTICED KINDS OF WEEDS IN TREE NURSERIES. (GE)**  
M Paetzholdt  
*Gesunde Pflanzen* 19(12):241-244  
Dec 1967 464.8 G33  
Claytonia perfoliata, Cuscuta, Glechoma hederacea, Nurseries, Pinus, Rorippa sylvestris, Rosa, Weeds.

**1035-69**  
**HARDWORKING HERBICIDES.**  
R D Palmer  
*Texas Agr Prog* 14(3, SUMMER):21-23  
1968 100 T31TE  
Chemical control (weeds), Field crops, Herbicides, Plant protection. Many herbicides are discussed.

**1036-69**  
**SOME CONSIDERATIONS CONCERNING THE PROSPECTIVE USE OF HERBICIDES IN AGRICULTURE. (RUM)**  
N Sarpe  
*Probl Agr* 20(10):64-69  
Oct 1968 21 R862  
Conferences, Crop yields, Fertilizers, Herbicides, Integrated control (weeds).

**1037-69**  
**WEED SEED RESERVES IN THE SOIL, IN CEREAL CROPS. (RUM)**  
L Spiridon  
*Bucharest Univ C I Parhon Grad Bot Lucrariile* 365-384  
1966 451 B853  
Corn, Seed germination, Weeds, Wheat. English summary.

**1038-69**  
**SEASONAL DYNAMICS OF WEEDS IN WINTER WHEAT CULTURE. (RUM)**  
L Spiridon  
*Bucharest Univ C I Parhon Grad Bot Lucrariile* 349-363  
1966 451 B853  
Climate, Plant physiology, Weeds, Wheat. English summary.

**1039-69**  
**CHOU MOELLIER YIELDS DRAMATICALLY INCREASED BY WEED CONTROL.**  
S M J Stockdill  
*New Zeal J Agr* 116(3):73,75  
Mar 1968 23 N48J  
Brassica, Chemical control (weeds), Crop yields, Desmetryne, Weed control.  
Chemical control of weeds in Chou moellier plantations with desmetryne has resulted in increased crop yields.

**1040-69**  
**MACHINERY AND TIMING IN RENOVATION-BLUEGRASS.**  
C H Tadge  
*Midwest Reg Turf Conf Proc* 1968 MEETING:31-33  
04 Mar 1968 60.19 M58  
Chemical control (weeds), Equipment, Grasses, Poa annua, Soil analysis, Turf, Weed control.

**1041-69**  
**RENOVATION TOWARD BENTGRASS.**  
T Woehrle  
*Midwest Reg Turf Conf Proc* 1968 MEETING:29-31  
04 Mar 1968 60.19 M58  
Agrostis, Grasses, Poa annua, Soil analysis, Soil conservation, Tricalecium arsenate, Turf, Weed control.

**OTHER PESTS**

**1042-69**  
**THE CROW MASS TRAP, A POSSIBILITY FOR THE REDUCTION OF THE CARRION CROW POPULATION (CORVUS CORONE CORUNE). (GE)**  
W Keil  
*Gesunde Pflanzen* 19(3):56-62  
Mar 1967 464.8 G33  
Agricultural research, Attractants, Bird pests, Crows, Pest control, Traps.

**1043-69**  
**THE INDIAN MYNAH.**  
J L Long  
*West Aust J Agr* 9(8):376-377  
Aug 1968 23 W52J  
Bird pests, Fruit.

**1044-69**  
**THE RED-WHISKERED BULBUL.**  
J L Long  
*West Aust J Agr* 9(8):378-379  
Aug 1968 23 W52J  
Bird pests, Fruit, Vegetables.

**1045-69**  
**CONTROL OF EARTHWORM.**  
B N Saxon H G Khalsa  
*Pesticides* 1(8):19-20 REF  
Apr 1968 SB951.P43  
Chinese soapberries, Chlorinated hydrocarbons, Copper sulfate, DDT, Earthworms, Plant extracts, Plant pest control, Soil sanitation.

**LIVESTOCK PROTECTION**

**1046-69**  
**PISCICULTURE: RAISING TROUT IN SALT WATER. (FR)**  
Anonymous  
*Corcoricas Monde* (JUL-AUG):14  
1968 47.8 C64  
Feeding, Fish conservation, Fish culture, Productivity, Saline water, Trout.

**1047-69**  
**THE FOURTH STUDY CIRCLE ON THE PROBLEMS AND VARIOUS OPTIONS OF ANIMAL NUTRITION LYON 1968. (FR)**  
Anonymous  
*Corcoricas Monde* (JUL-AUG):21-23  
1968 47.8 C64  
Agricultural industries, Animal nutrition, Estrogens, Hygiene, Productivity, Research.

**1048-69**  
**BIOGENIC MONOAMINES IN HIRUDO MEDICINALIS.**  
B Ehinger B Falck H E Myhrberg  
*Histochemie* 15(2):140-149 REF  
1968 384 H622

Amines, Animal anatomy, Animal physiology, Biochemistry, Catechol amines, Cell nucleus, Chromatography, Fluorescence microscopy, Ganglion cells, Hirudinea, Indole, Nerves, Nervous system, Plasma membrane. Fifty medical leeches were used in the study.

**1049-69**  
**THE PRIMARY IMPORTANCE OF FOOD. (FR)**  
R Ferrando  
*Corcoricas Monde* (JUL-AUG):4-7  
1968 47.8 C64  
Agricultural industries, Agriculture, Animal breeding, Cattle, Feed, Fertilizers, Food nutritive value, Meat, Proteins, Vitamin a.

**1050-69**  
**THE EFFECT OF MALACHITE GREEN AS A FUNGICIDE.**  
R Martin  
*Ohio J Sci* 68(2):118-121 REF  
Mar 1968 410 OH3  
Aquatic fungi, Chemical control (pests), Dyes, Fish, Fungicides, Malachite green, Parasitism, Research, Roe, Water.

**1051-69**  
**RECENT RESEARCH ON ENZYME INDUCTION. IN: EXPERIMENTAL EMBRYOLOGY TO MOLECULAR BIOLOGY. EDITED BY E. WOLFF. (FR)**  
J Turchini  
143-169 REF PARIS, DUMOND  
1967 QH431.W6  
Animals, Biochemistry, Embryology, Enzymes, Histochemistry, Research.

**DISEASES**

**1052-69**  
**INTERSTATE TRANSPORTATION OF ANIMALS AND POULTRY. PART 74. SCABIES IN SHEEP. INTERSTATE MOVEMENT.**  
R J Anderson  
*Fed Regist* 34(46):5007-5008  
08 Mar 1969 L1.451  
Animals, Infectious diseases, Interstate commerce, Livestock diseases, Scabies, Sheep.

**1053-69**  
**INTRODUCTION OF FOREIGN DISEASES MUST BE PREVENTED.**  
R H Ansell  
*New Zeal J Agr* 116(3):59,61,63  
Mar 1968 23 N48J  
Epizootic diseases, Insect vectors, Livestock diseases, Pest control.  
Case histories of disease outbreaks are discussed to stimulate New Zealand farmers to be alert to possible foreign livestock diseases and to the relevant governmental regulations.

**1054-69**  
**THE RE-APPEARANCE OF RABIES IN FRANCE. THE FIRST CASE IN A FOX FROM THE MOSELLE REGION. (FR)**  
P Atanasiu A Gamet P Graviere M Le Guilloux J C Guillou Et Al  
*Acad Vet France Bull* 41(4):161-163  
04 Apr 1968 41.9 R24  
Foxes, Rabies.

**1055-69**  
**ON THE CULTIVATION OF TRYPARASOMA BRUCEI AND OF ITS REPRODUCTIVE CAPACITY IN VIRUS-INFECTED HOSTS. (GE)**  
K Biencz  
*Acta Trop* 25(1):39-71 REF  
1968 475 AC8  
Chickens, Mice, Miyagawanella group viruses, Poultry diseases, Tissue culture, Trypanosoma brucei, Virus diseases (animals). English and French abstracts.

**1056-69**  
**WHEAT AS A STOCK FODDER.**  
A J Boyle J P Sjostedt R E Freer C F Cargill

# LIVESTOCK PROTECTION

1057-69

*New S Wales Dep Agr Div Plant Indus Bull P 361:8P*  
1968 23 N47BP

Agricultural economics, Agricultural education, Animal nutrition, Avitaminosis, Feed, Feed toxicity, Food nutritive value, Limestone, Livestock, Prices, Tables (data), Vitamin a, Wheat.

1057-69

**HINTS ON THE USE OF HIGH-PERCENTAGE HYDROGENPEROXIDE PREPARATIONS IN THE TREATMENT OF CALF MYCOSIS.** (GE)

E Brater R Ludewig C Schonborn

*Monatsh Vet 23(7):258-259*

01 Apr 1968 41.8 M742

Cattle, Drug therapy, Hydrogen peroxide, Livestock diseases, Mycosis. English and Russian summaries.

1058-69

**MARKET CATTLE TESTING FOR BRUCELLOSIS AND TUBERCULOSIS.**

*Can Dep Agr Publ 1364:6P*

1968 7 C16PU

Agricultural education, Blood analysis, Brucellosis, Cattle, Cattle testing, Infectious diseases, Livestock diseases, Marketing, Tuberculosis.

1059-69

**CONTROL OF EQUINE INFECTIOUS ANEMIA (SWAMP FEVER).**

*Can Dep Agr Publ 1363:6P*

1968 7 C16PU

Agricultural education, Disease control, Equine infectious anemia, Horses, Infectious diseases, Symptomatology, Virus diseases (animals).

1060-69

**SEROLOGICAL CLASSIFICATION OF SOVIET STRAINS OF LEPTOSPIRA BELONGING TO THE GROUP HEBDOMADIS.**

Y G Cernukha R A Isayeva

*J Hyg Epidemiol Microbiol Immunol 12(4):473-481* REF

1968 448.8 J826

Antibodies, Leptospira, Serological tests, Taxonomy.

1061-69

**RABBIT DESTRUCTION PRESENT AND FUTURE.**

E Chisholm

*New Zeal J Agr 116(3):68-69,71*

Mar 1968 23 N48J

Legislation, Pest control, Rabbits.

The achievements of the Rabbit Destruction Council in New Zealand are discussed. The economic values of the different control methods are given.

1062-69

**EFFECT OF SPECIFIC IMMUNE MOUSE SERUM ON THE GROWTH OF SALMONELLA ENTERITIDIS IN NONVACCINATED MICE CHALLENGED BY VARIOUS ROUTES.**

F M Collins

*J Bacteriol 97(2):667-675* REF

Feb 1969 448.3 J82

Bacterial diseases (animals), Immunization, Mice, Salmonella enteritidis, Serum.

1063-69

**EFFECT OF SPECIFIC IMMUNE MOUSE SERUM ON THE GROWTH OF SALMONELLA ENTERITIDIS IN MICE PREIMMUNIZED WITH LIVING OR ETHYL ALCOHOL-KILLED VACCINES.**

F M Collins

*J Bacteriol 97(2):676-683* REF

Feb 1969 448.3 J82

Immunity, Mice, Salmonella enteritidis, Vaccines.

1064-69

**THE POSSIBLE INVOLVEMENT OF THIAMINE IN THE AETIOLOGY OF CEREBRO-CORTICAL NECROSIS.**

E T Davies A H Pill

*Vet Rec 83(26):681-682*

28 Dec 1968 41.8 V641

# BIBLIOGRAPHY

Amprolium, Avitaminosis, Brain, Calves, Enzymes, Livestock diseases, Necrosis, Thiamine.

1065-69

**INVESTIGATION OF THE GENERAL OCCURRENCE OF PATHOLOGIC-ANATOMIC CHANGES IN THE OVARIES OF CATTLE- A NEW WAY IN THE FIGHT AGAINST STERILITY.** (GE)

R Dieter

*Tierarztl Umsch 23(11):516-518*

01 Nov 1968 41.8 T445

Cattle, Livestock diseases, Ovarian cysts, Ovaries, Sterility.

1066-69

**NOTICE OF FILING OF PETITION FOR FOOD ADDITIVE SULFADIMETHOXINE.**

R E Duggan

*Fed Regist 34(47):5086*

11 Mar 1969 L1.451

Coccidiosis, Food additives, Fowl cholera, Livestock diseases, Sulfadimethoxine, Turkeys, Water.

1067-69

**FOOT-AND-MOUTH DISEASE (I).**

J Edwardson

*Great Brit Min Agr Fish Food Agr 75(9):443-446*

Sep 1968 10 G79J

Baby pigs, Cattle, Diagnosis, Epidemiology, Foot-and-mouth disease, Livestock diseases, Milk analysis, Virus diseases (animals). To be continued

1068-69

**A STUDY ON THE SYNTHESIS AND ABSORPTION OF CHOLESTEROL IN HYDATID CYSTS (ECHINOCOCCUS GRANULOSUS).**

G J Frayha

*Compar Biochem Physiol 27(3):875-878* REF

Dec 1968 444.8 C73

Cestoda, Cholesterol, Larvae, Radioactive tracers.

1069-69

**PROBLEMS OF CATTLE LEUCOSIS: PRODUCTION LOSS - INFLUENCE OF HEREDITY AND ENVIRONMENT ON PROPAGATION CONTROL.** (GE)

E Gehrk W Verter

*Monatsh Vet 23(7):249-255* REF

01 Apr 1968 41.8 M742

Agricultural regulation, Cattle, Economics, Environment, Heredity, Leukosis, Livestock diseases. English and Russian summaries.

1070-69

**IMMUNOFLUORESCENT DEMONSTRATION OF STAPHYLOCCAL LEUCOCIDIN COMPONENTS F AND S.**

A Gershon G P Gladstone

*Brit J Exp Pathol 49(5):477-495* REF

Oct 1968 448.8 B772

Antigens, Bacteria, Cells, Fluorescent antibody technic, Immunochemistry, Leucocidin, Rabbits, Research, Staphylococcus, Tables (data).

1071-69

**EFFECT OF VOLATILE FATTY ACIDS ON SALMONELLA TYPHIMURIUM.**

J M Goepfert R Hicks

*J Bacteriol 97(2):956-958*

Feb 1969 448.3 J82

Bactericides, Fatty acids, Salmonella typhimurium, Temperature.

1072-69

**ENLARGED THYROID GLANDS IN CALVES BORN TO HEIFERS FED A SOLE DIET OF LEUCAENA LEUCOCEPHALA.**

R J Hamilton L E Donaldson L J Lambourne

*Australian Vet J 44(10):484*

Oct 1968 41.8 AU72

Calves, Cattle, Leucanina glauca, Poisonous plants, Thyroid gland.

1073-69

**CHARACTERIZATION AND BIOLOGICAL ACTIVITY OF THE MONOCYSTOSIS-PRODUCING AGENT OF LISTERIA MONOCYTOGENES.**

I A Holder C P Sword

*J Bacteriol 97(2):603-611* REF

Feb 1969 448.3 J82

Bacterial diseases (animals), Chemical analysis, Listeria monocytogenes, Metabolism.

1074-69

**MINERAL DEFICIT IN CATTLE OF THE SZCZECIN VOYEVODSHIP.** (GE)

A Jcdrczowski

*Monatsh Vet 23(2):56-59*

15 Jan 1968 41.8 M742

Bolus, Breeding, Cattle, Cobalt, Deficiency diseases, Metabolism, Oxides, Therapeutics. Russian and English summaries.

1075-69

**COOPERATION BETWEEN VETERINARY EXAMINATION CENTERS AND VACCINATION STATIONS OF HUMAN MEDICINE IN THE CONTROL AND PROTECTION OF PERSONS POTENTIALLY EXPOSED TO RABIES INFEC- TION.** (GE)

U Johannsen P Rittenbach

*Monatsh Vet 23(7):266-270* REF

01 Apr 1968 41.8 M742

Animal diseases, Diagnosis, Human diseases, Immunization, Rabies, Veterinary medicine. English and Russian summaries.

1076-69

**ACQUIRED RESISTANCE TO BABESIA DIVERGENS IN EXPERIMENTAL CALVES.**

L P Joyner S F M Davies

*J Protozool 14(2):260-262*

May 1967 439.8 J82

Animal diseases, Babesia divergens, Cattle, Immunity, Laboratory animals, Protozoa.

1077-69

**THE NEPHROSIS-NEPHRITIS SYNDROME IN CHICKENS CAUSED BY A HOLTE STRAIN OF INFECTIOUS BRONCHITIS VIRUS.**

R J Julian N C Willis

*Can Vet J 10(1):18-19*

Jan 1969 41.8 R3224

Gumboro disease, Histopathology, Infectious bronchitis virus, Infectious diseases, Lesions, Nephritis, Poultry diseases.

1078-69

**APPLICATION OF LATEX-AGGLUTINATION TO THE MEASUREMENT OF ANTIBODY RESPONSE TO M. PNEUMONIAE VACCINES.**

M Kende

*Ind Acad Sci Proc 77:124*

1968 500 IN2

Agglutination, Antibodies, Latex, Methodology, Mycoplasma pneumoniae, Serological tests, Vaccines.

1079-69

**LIPIDOSIS OF THE HEPATIC RETICULO-ENDOTHELIAL CELLS IN A SHEEP.**

L Laws J R Saal

*Australian Vet J 44(9):416-417*

Sep 1968 41.8 AU72

Cells, Cytoplasm, Diagnosis, Histochemistry, Lipids, Liver, Livestock diseases, Reticulendothelial system, Sheep.

1080-69

**TOXICITY OF CROTALARIA MUCRONATA TO SHEEP.**

L Laws

*Australian Vet J 44(10):453-455* REF

Oct 1968 41.8 AU72

Crotalaria mucronata, Mortality, Poisonous plants, Sheep.

1081-69

**NEURONOPATHY IN SHEEP FED SWAINSONA LUTEOLA AND S. GALEGIFOLIA.**

L Laws R B Anson  
*Australian Vet J* 44(10):447-452 REF  
 Oct 1968 41.8 AU72  
 Ataxia, Biochemistry, Central nervous system, Histochemistry, Poisonous plants, Sheep, Swainsona.

1082-69  
**RUMEN BACTERIA. DRUGS FOR VETERINARY USE; DRUG EFFICACY STUDY IMPLEMENTATION.**  
 H L Ley  
*Fed Regist* 34(46):5038  
 08 Mar 1969 L1.451  
 Bacteria, Drug therapy, Drugs, Rumens, Stimulants.

1083-69  
**SULFAMERAZINE. DRUGS FOR VETERINARY USE; DRUG EFFICACY STUDY IMPLEMENTATION.**  
 H L Ley  
*Fed Regist* 34(49):5187  
 13 Mar 1969 L1.451  
 Drug therapy, Drugs, Infectious diseases, Livestock diseases, Sulfamerazine, Veterinary medicine, Water.

1084-69  
**SODIUM ARSANILATE TABLETS FOR WATER MEDICATION. DRUGS FOR VETERINARY USE; DRUG EFFICACY STUDY IMPLEMENTATION.**  
 H L Ley  
*Fed Regist* 34(41):3712  
 01 Mar 1969 L1.451  
 Accident prevention, Dosage, Drug therapy, Livestock diseases, Sodium arsanilate, Swine dysentery.

1085-69  
**STUDIES ON THE BLOOD PARASITES OF VARIOUS WILD BIRDS OF SWITZERLAND. (GE)**  
 V Lovrics  
*Acta Trop* 24(1):19-58 REF  
 1967 475 AC8  
 Birds, Blood parasites, Demography, Plasmodium, English and French abstracts

1086-69  
**WATER BALANCE IN PINOTTII MALARIA OF PIGEONS.**  
 R D Manwell W B Stone  
*J Protozool* 14(3):473-476 REF  
 Aug 1967 439.8 J82  
 Animal diseases, Malaria, Pigeons, Plasmodium pinottii, Protozoa, Water.

1087-69  
**A NEW SALMONELLA SEROTYPE OF THE C 2 GROUP, SALMONELLA SANDOW. (GE)**  
 G Mueller J Kiesewalter  
*Monash Vet* 23(7):265  
 01 Apr 1968 41.8 M742  
 Livestock diseases, Meat, Salmonella sandow, Serological tests, Swine. English and Russian summaries.

1088-69  
**INSULIN AND THYROID HORMONES IN RELATION TO MAMMARY DEVELOPMENT IN HYPOPHYSECTOMIZED RABBITS.**  
 A Norgren  
*Lund Univ Acta Univ Lundensis Sect 11 Med Math Sci Ker Nat* (34):17P REF  
 1967 502 L97A  
 Cortisone, Growth factors, Hormones, Insulin, Mammary glands, Ovaries, Rabbits, Thyroid gland.

1089-69  
**FIMBRIATION, PELLICLE FORMATION AND THE AMOUNT OF GROWTH OF SALMONELLA IN BROTH.**  
 D C Old I Corneil L F Gibson A D Thomson J P Duguid  
*J Gen Microbiol* 51(PT 1):1-16 REF  
 Apr 1968 448.3 J823  
 Culture media, Hemagglutination, Oxygen, Salmonella typhimurium.

1090-69  
**RELATIONSHIP BETWEEN INDOLE PRODUCTION, NITRATE PRODUCTION AND CARBOHYDRATE FERMENTATION IN VIBRIO CHOLERAE.**  
 A Ozawa  
*Jap J Microbiol* 11(1):25-31  
 Mar 1967 448.8 J273  
 Carbohydrates, Fermentation, Indole, Metabolism, Nitrites, Vibrio.

1091-69  
**EQUINE COITAL EXANTHEMA.**  
 R R Pascoe P B Spradbury T J Bagust  
*Australian Vet J* 44(10):485  
 Oct 1968 41.8 AU72  
 Coital exanthema, Horses, Reproductive organs, Virus diseases (animals).

1092-69  
**MYCOTOXINS IN POULTRY FOODS.**  
 B A Peddie  
*Poultry Farmer (Sydney)* 35(52):10,12,14,16,18  
 29 Jun 1968 280.28 OR32  
 Food contamination, Fungus diseases (animals), Microorganisms, Mortality, Mycosis, Mycotoxicosis, Mycotoxins, Poultry diseases.

1093-69  
**AN ELECTRON MICROSCOPIC STUDY OF TRANSMISSIBLE GASTROENTERITIS IN SWINE.**  
 M Pensaert  
*Ind Acad Sci Proc* 77:157  
 1968 500 IN2  
 Animal physiology, Electron microscopy, Gastroenteritis, Swine, Virus diseases (animals).

1094-69  
**COMPARISON OF UNDEFINED MEDIUM AND ITS DIALYZABLE FRACTION FOR GROWTH OF MYCOPLASMA.**  
 M E Pollock S V Bonner  
*J Bacteriol* 97(2):522-525  
 Feb 1969 448.3 J82  
 Bacterial diseases (animals), Chemical analysis, Dialysis, Mycoplasma.

1095-69  
**SERUM-MEDIATED IMMUNE CELLULAR RESPONSES TO BRUCELLA MELITENSIS. V. INFECTION OF MACROPHAGES UNDER ANAEROBIC CONDITIONS.**  
 D J Ralston S S Elberg  
*J Bacteriol* 97(2):471-480 REF  
 Feb 1969 448.3 J82  
 Bacterial diseases (animals), Brucella melitensis, Immunity, Macrophages, Oxygen, Serum.

1096-69  
**ON A NEW AND CHANGED PICTURE OF THE SOCALLED EDEMA DISEASE IN THE DIFFERENTIAL DIAGNOSIS OF HOG CHOLERA. 5TH. COMMUNICATION. THE PART PLAYED BY THE LIVER IN THE COURSE OF THE DISEASE. (GE)**  
 E Rexroth  
*Tierarztl Umsch* 23(11):520-532 REF  
 01 Nov 1968 41.8 T445  
 Diagnosis, Edema disease, Hog cholera, Liver, Swine.

1097-69  
**AN ANTI-BRUCELLA PRINCIPLE OF PERITONEAL MACROPHAGES.**  
 H R Rezai  
*Australian J Exp Biol Med Sci* 46(PT 6):783-785  
 Dec 1968 442.8 AU7  
 Antimetabolites, Brucella abortus, Guinea pigs, Immunization, Macrophages.

1098-69  
**ADOPTIVE TRANSFER OF IMMUNITY TO BABESIA RODHAINI BY SPLEEN CELLS FROM IMMUNE RATS.**  
 J A Roberts  
*Australian J Exp Biol Med Sci* 46(PT 6):807-808 REF

Dec 1968 442.8 AU72  
 Babesia, Blood parasites, Immunity, Spleen, Tissue grafting.

1099-69  
**SUGAR TRANSPORT IN MYCOPLASMA GALLISEPTICUM.**  
 S Rottem S Razin  
*J Bacteriol* 97(2):787-792 REF  
 Feb 1969 448.3 J82  
 Biochemistry, Mycoplasma gallisepticum, Plant translocation, Sugars, Temperature.

1100-69  
**VARIABLE RESULTS OF SODIUM DEOXYCHOLATE TESTS OF NODAMURA VIRUS, AN ETHER AND CHLOROFORM RESISTANT ARBOVIRUS.**  
 W F Scherer  
*Soc Exp Biol Med Proc* 129(1):194-199  
 Oct 1968 442.9 SO1  
 Chloroform, Ethers, Nodamura virus, Research, Sodium deoxycholate, Virucides, Virus diseases (animals).

1101-69  
**THE MOLECULAR STRUCTURE OF THE TRANSDUCING PARTICLES OF SALMONELLA-PHAGE P 22. I. DENSITY GRADIENT ANALYSIS OF INTACT PHAGES. (GE)**  
 H Schmieger  
*Z Vererbungslehre* 201(4):336-347 REF  
 15 Nov 1968 442.8 Z34  
 Bacteriophages, Centrifugation, Methodology, Salmonella. English abstract

1102-69  
**BIOLOGICAL OBSERVATIONS ON SOME SANDFLIES (PHLEBOTOMUS) OF RANCHO GRANDE (VENEZUELA). 4. INVESTIGATION OF ALIMENTARY PREFERENCE OF THE FEMALES OF P. TOWNSENDI IN NATURE. (SP )**  
 J V Scorzai I Ortiz I McLure  
*Acta Biol Venezolica* 6(1):41-51  
 31 Mar 1968 475 AC86  
 Food habits, Insect vectors, Leishmaniasis, Methodology, Phlebotomus, Serological tests. English abstract

1103-69  
**A PROTECTIVE BAG FOR TEATS OF COWS AS A PREVENTIVE MEASURE AGAINST MASTITIS. (GE)**  
 D Sencek  
*Tierarztl Umsch* 23(11):534  
 01 Nov 1968 41.8 T445  
 Cattle, Livestock diseases, Mastitis, Preventive medicine, Teats.

1104-69  
**MORPHOLOGIC AND HISTOCHEMICAL NATURE OF ANAPLASMA MARGINALE.**  
 C F Simpson J M Kling J N Love  
*Amer J Vet Res* 28(125):1055-1065 REF  
 Jul 1967 41.8 AM3A  
 Anaplasma, Blood analysis, Electron microscopy, Histochemistry.

1105-69  
**THE SUSCEPTIBILITY OF SOME AUSTRALIAN FAUNA TO INFECTION WITH FOOT AND MOUTH DISEASE VIRUS.**  
 W A Snowdon  
*Australian J Exp Biol Med Sci* 46(PT 6):667-687 REF  
 Dec 1968 442.8 AU7  
 Cattle, Foot-and-mouth disease virus, Serological tests, Virus diseases (animals), Wildlife.

1106-69  
**THE ISOLATION OF INFECTIOUS BOVINE RHINOTRACHEITIS VIRUS FROM BOVINE SEMEN.**  
 P B Spradbury  
*Australian Vet J* 44(9):410-412 REF  
 Sep 1968 41.8 AU72

1107-69

Animal disease transmission, Artificial insemination, Cattle, Infectious bovine rhinotracheitis virus, Livestock diseases, Semen. Contaminated semen might produce infection.

1107-69

ELECTRON MICROSCOPY AS AN AID TO THE RAPID IDENTIFICATION OF ANIMAL VIRUSES.

P B Spradbow

*Australian Vet J* 44(9):427

Sep 1968 41.8 AU72

Diagnosis, Electron microscopy, Serological tests, Virology, Virus diseases (animals).

1108-69

THE SUSCEPTIBILITY OF MICE TO LEPTOSPIRA POMONA.

P B Spradbow

*Australian J Exp Biol Med Sci* 46(PT 6):787-789

Dec 1968 442.8 AU7

Leptospira pomona, Mice, Susceptibility.

1109-69

UNCOATING AND DEVELOPMENT OF VACCINIA VIRUS IN TISSUECULTURED CELL-FRAGMENTS INDUCED WITH CONCENTRATED EXTRACTS FROM MARINE ALGAE.

T J Starr O Holtermann

*Ind Acad Sci Prac* 77:125-126

1968 500 IN2

Algae, Cytology, Plant extracts, Tissue culture, Vaccinia virus.

1110-69

SPLENITIS IN HORSES.

R A Swan

*Australian Vet J* 44(10):459-461

Oct 1968 41.8 AU72

Abcesses, Horses, Livestock diseases, Mortality, Spleen.

1111-69

INHIBITORS OF BACTERIAL GROWTH IN HORSE KIDNEY. PRELIMINARY REPORT. (FI)

O A Tiainen

*Suamen Elainlaakarilehti* 74(9):308-309

Sep 1968 41.8 F49

Antibiotics, Bacterial diseases (animals), Culture media, Growth, Horses, Inhibitors, Kidneys, Sarcina lutea. English summary.

1112-69

SEROLOGIC EVIDENCE OF DISEASES IN TEXAS COYOTES.

D O Trainer F F Knowlton

*J Wildlife Manage* 32(4):981-983 REF

Oct 1968 41.0 J827

Animal diseases, Coyotes, Infectious diseases, Serological tests. Some of the diseases tested were: Brucellosis, tularemia, eastern and western viral encephalitis, vesicular stomatitis, encephalomyocarditis, and infectious canine hepatitis.

1113-69

ATTACHMENT OF BDELOVIBRIO BACTERIOVORUS TO CELL WALL MUTANTS OF SALMONELLA spp. AND ESCHERICHIA COLI.

M Varon M Shilo

*J Bacteriol* 97(2):977-979

Feb 1969 448.3 J82

Bdellovibrions, Cell wall, Escherichia coli, Mutations, Parasitism, Salmonella.

1114-69

EXPERIMENTAL WHITEWOOD, ATALAYA HEMIGLAUCA, POISONING IN THE HORSE. (ABSTRACT).

J H Whittem

*Australian Vet J* 44(9):426

Sep 1968 41.8 AU72

Atalaya hemiglauca, Crotalaria retusa, Diagnosis, Horses, Poisoning, Poisonous plants, Walkabout disease.

1115-69

THE RECOMBINATION OF BROMOURACIL-CONTAINING DEOXYRIBONUCLEIC ACID IN SALMONELLA TYPHIMURIUM TRANSDUCTION.

B M Wilkins

*J Gen Microbiol* 51(PT 1):107-114 REF

Apr 1968 448.3 J823

Bacteriophages, Biochemistry, Deoxyribonucleic acid, Electron microscopy, Salmonella typhimurium.

1116-69

STUDIES ON THE ETIOLOGY OF BOVINE LEUCOSIS - 4. GENETIC STUDIES. (GE)

W Wittmann

*Monatsh Vet* 23(7):255-258 REF

01 Apr 1968 41.8 M742

Animal genetics, Cattle, Etiology, Immunity, Leukos, Livestock diseases, Research. English and Russian summaries.

1117-69

SEROLOGICAL CHANGES IN EX-GERMFREE RATS MONO-ASSOCIATED WITH SALMONELLA TYPHIMURIUM.

B S Wostmann

*Ind Acad Sci Prac* 77:124-125

1968 500 IN2

Diagnosis, Electrophoresis, Germ-free life, Proteins, Rats, Salmonella typhimurium, Serological tests.

1118-69

METABOLISM OF GLUCOMANNAN-PROTEIN DURING GERMINATION OF BEAN RUST SPORES.

W K Wynn C Gajdusek

*Bayce Thampsan Inst Contrib* 24(5, OCT-DEC):123-138 REF

Dec 1968 451 B69

Beans, Fungus diseases (plants), Plant metabolism, Puccinia graminis, Rust, Spore germination.

## ARTHROPODS

1119-69

BLACK FLIES (DIPTERA, SIMULIDAE) OF VOLOGDA REGION AND THEIR CONTROL.

S I Adrianov

*Entomol Rev* 46(1 JAN-MAR):107-110

Mar 1967 421 R322AE

Catalogs, Chemical control (insects), DDT, Simuliidae, Zoogeography.

1120-69

ON THE TRYPANOSOME-INFECTION RATE OF GLOSSINA MORSITANS IN THE ULANGA DISTRICT, (TANZANIA).

R Geigy M Kauffmann P Diehl

*Acta Trop* 25(1):72-77

1968 475 AC8

Glossina morsitans, Insect vectors, Surveys, Trypanosoma.

1121-69

ERADICATION OF CATTLE TICK (BOOPHILUS MICROPLUS) FROM MAGNETIC ISLAND, QUEENSLAND, IN THE PRESENCE OF NATIVE FAUNA.

L A Y Johnston R H Wharton J H Calaby

*Australian Vet J* 44(9):403-405

Sep 1968 41.8 AU72

Boophilus microplus, Cattle, Horses, Mammals, Pest control, Wildlife. Removal of horses and cattle 26 weeks eradicated the ticks.

1122-69

SOME PARASITES OF THE COMMON CROW, CORVUS BRACHYRHYNCHOS BREHM, OHIO.

J Jones

*Ohio J Sci* 68(1):25-31 REF

Jan 1968 410 OH3

Arachnida, Cestoda, Crows, Nematodes, Parasitism, Research.

1123-69

AUTO-ECOLOGY OF SOME SIMULIIDAE SPECIES. (GE)

W Ruhm

*Z Angew Entomol* 61(4):466-471

May 1968 421 Z36

Boophthora erythrocephala, Cattle, Insect ecology, Livestock diseases, Mortality, Ovulation, Simuliidae. English summary.

1124-69

TINEA COLUMBARIELLA WCK. AS A PEST ON IMPORTED DUCK FEATHERS. (GE)

H Strumpel

*Anz Schadlingskunde* 41(6):84-88

Jun 1968 421 AN9

Ducks, Experimental insects, Feathers, Insect biology, Insect identification, Insect morphology, Insect rearing, Larvae, Tinea columbariella. English summary.

1125-69

INVESTIGATIONS CONCERNING THE ECOLOGY AND CONTROL OF THE FACE FLY, MUSCA AUTUMNALIS DE GEER. (GE)

R Wiesmann

*Entomol Gesell Basel* 17(3):61-77 REF

Sep 1967 QL461.E58

Attractants, Brucella abortus, Chemical control (insects), Hydrotaea, Insect behavior, Insect ecology, Insect morphology, Insect pests, Insect taxonomy, Insect vectors, Livestock, Livestock diseases, Musea autumnalis, Rickettsia conjunctivae-bovis, Zoogeography.

## PARASITES

1126-69

PNEUMOSTRONGYLUS TENUIS IN WHITE-TAILED DEER IN MAINE.

D F Behrend J F Witter

*J Wildlife Manage* 32(4):963-966

Oct 1968 410 J827

Deer, Nematodes, Parasitism, Pneumostrongylus tenuis.

1127-69

PLUNGE OR SHOWER DIPS.

J T Fearn

*S Australia J Agr* 72(1):34-39

Aug 1968 23 SO84

Dipping, Equipment, Sheep.

1128-69

THE ANTHELMINTIC ACTIVITY OF THE OPTICAL ISOMERS OF TETRAMISOLE IN SHEEP AND CATTLE.

B A Forsyth

*Australian Vet J* 44(9):395-400

Sep 1968 41.8 AU72

Anthelmintics, Cattle, Dosage, Helminthiasis, Isomers, Nematodes, Sheep, Tetramisole.

1129-69

ON FISCHOEDERIUS COBBOLDI-A POUCHED AMPHISTOME FROM CATTLE IN INDIA.

N K Gupta T Dutta

*Panjab Univ Res Bull (N s)18(PT 1-2):41-52*

Jun 1967 513 EA72

Cattle, Morphology, Taxonomy, Trematoda.

1130-69

TREATMENT OF EXPERIMENTALLY-INDUCED LUNGWORM OF THE CAT BY PARENTERAL ADMINISTRATION OF TETRAMISOLE.

J M Hamilton

*Vet Rec* 83(26):665-666

28 Dec 1968 41.8 V641

Aclostrongylus abstrusus, Anthelmintics, Cats, Drug therapy, Tetramisole.

1131-69

THE PATHOGENICITY OF CHABERTIA OVINA IN CALVES.

## BIBLIOGRAPHY

## RESIDUES

1152-69

1132-69  
**ANTIBODY AND CELLULAR RESPONSE IN LAMBS IMMUNIZED AGAINST TRICHOSTRONGYLUS AXEI.**  
 P K Sinha  
*Amer J Vet Res* 28(124):799-808 REF  
 May 1967 41.8 AM3A  
 Antibodies, Serological tests, Sheep, Trichostrongylidac.

## COMMODITY PROTECTION

### ARTHROPODS

1133-69  
**TERMITE REARING AND TESTING OF MAKROLIN AS A WOODPRESERVATIVE AGAINST TERMITES. (ISOPTERATEMITIDAE).**  
 M W Roomi I A Khan S H Ahsrafi  
*Pakistan J Sci Indus Res* 10(3):225-227  
 Jul 1967 475 P174  
 Chemical control (insects), Insect rearing, Lumber preservatives, Termites.

### MICROBIAL CONTAMINATION

1134-69  
**BOTULISM AFTER EATING PORK IN DORTMUND. (GE)**  
 W Alterauge  
*Arch Lebensmittelhyg* 19(5):113-114  
 May 1968 41.8 L49  
 Bacterial diseases (animals), Botulism, Diagnosis, Food poisoning, Pork.

1135-69  
**ON THE MICROBIOLOGICAL QUALITY OF HEN'S EGGS. (FI)**  
 M Kyti L Tuomainen E Nikunen M Uotila  
*Suomen Eläinlaakarilehti* 74(9):297-306 REF  
 Sep 1968 41.8 F49  
 Chickens, Eggs, Microbial contamination, Microbiology, Molds, Storage, Storage diseases. English, German and Swedish summaries.

### ENVIRONMENTAL CONTAMINATION

1136-69  
**FISH DEATHS AND PLANT PROTECTION PREPARATIONS. (GE)**  
 G Nietzke  
*Gesunde Pflanzen* 19(12):254-258  
 Dec 1967 464.8 G33  
 Fish culture, Fishkill, Fungicides, Herbicides, Insecticides, Plant protection, Spraying, Toxicity. Listing of chemicals dangerous to aquatic life.

### RESIDUES

1137-69  
**DISTRIBUTION OF RADIOACTIVITY IN MILK RESULTING FROM ORAL ADMINISTRATION OF <sup>14</sup>C-LABELED CARBARYL.**  
 R L Baron N J Palmer R Ross J Doherty W C Jacobson  
*Ass Offic Anal Chem* J 51(1):32-34 REF  
 Jan 1968 381 AS7

Carbaryl, Carbon isotopes, Chemical reactions, Chromatography, Milk, Pesticide residues, Radioactivity.

1138-69  
**CAUTION WITH CHEMICALS.**  
 P Burdett  
*Midwest Reg Turf Conf Proc* 1968 MEETING:24-26  
 04 Mar 1968 60.19 M58  
 Accident prevention, Accidents, Agricultural products, Chemicals, Pesticide residues, Spraying equipment.

1139-69  
**METHOXYCHLOR AS A BLACKFLY LARVICIDE, PERSISTENCE OF ITS RESIDUES IN FISH AND ITS EFFECT ON STREAM ARTHROPODS.**

G E Burdick H J Dean E J Harris J Skea C Frisa Et Al  
*N Y Fish Game* J 15(2):121-142 REF  
 Jul 1968 410 N48  
 Aquatic insects, Chlorinated hydrocarbons, DDT, Fish, Insecticide residues, Larvicides, Methoxychlor, Streams, Water pollution.

1140-69  
**STUDIES OF EFFECTS OF DURSBAN AND FENTHION INSECTICIDES ON WILDLIFE.**

W E Burgoine  
*Down Earth* 24(2,FALL):31-33  
 1968 381 D75  
 Chemical control (insects), Culicidae, Diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate, O,O f, Insecticide residues, Insecticides, Surveys, Water analysis, Wildlife.

1141-69  
**RESPONSIBILITIES AND ORGANISATION OF TOXICOLOGY IN VETERINARY MEDICINE. (GE)**

W-Cae H J Rummel  
*Monatsh Vet* 23(7):241-246  
 01 Apr 1968 41.8 M742  
 Chemistry, Herbicides, Livestock, Pesticide residues, Pesticides, Toxicology, Veterinary medicine. English and Russian summaries.

1142-69  
**STUDIES OF LOSSES OF PESTICIDES DURING SAMPLE PREPARATION.**

M Chiba H V Morley  
*Ass Offic Anal Chem* J 51(1):55-62  
 Jan 1968 381 AS7  
 Animal extracts, Carbaryl, Carbon isotopes, Chromatography, Dieldrin, Evaporation, Filters, Pesticide residues, Plant extracts, Polarization, Soil extracts.

1143-69  
**DETERMINATION OF DDT RESIDUES AND ITS METABOLITES IN PASTEURIZED FROZEN YOLKS BY GAS-LIQUID CHROMATOGRAPHY. (POL)**

A Cieslickzak W Martinek J Zerbe  
*Chem Anal* 23(5):113-114 REF  
 1968 385 C4233  
 Acetone, Chromatography, DDT, Egg yolks, Florisil, Insecticide residues, Metabolites, Pasteurization. English summary.

1144-69  
**DETERMINATION OF SEC-BUTYLAMINE RESIDUES IN FRUIT.**

E W Day F J Holzer J B Tepe J W Eckert M J Kolbezen  
*Ass Offic Anal Chem* J 51(1):39-44  
 Jan 1968 381 AS7  
 Aminobutane, 2-, Chromatography, Electron affinity, Ferbam, Fruit, Fungi, Pesticide residues, Spraying, Thiram, Ziram.

1145-69  
**THE PRESENT STATE OF THE KNOWLEDGE CONCERNING THE INFLUENCE OF FUNGICIDES ON THE FERMENTATION OF GRAPE JUICES. (GE)**

H Ehrenhardt

Weinberg Keller 14(10):435-458 REF

Oct 1967 95.8 W435

Botrytis, Captan, Crop varieties, Fermentation, Folpet, Fungicides, Grapes, Pesticide residues, Reviews, Yeasts, Zineb. Influence of several other fungicides is discussed.

1146-69

**THIN LAYER CHROMATOGRAPHY IDENTIFICATION OF PESTICIDES USING DIP-COATED PRESENSITIZED MICROSCOPE SLIDES.**

N V Fchringer J D Ogger  
*J Chromatography* 25(1):95-101  
 Nov 1966 475 J824

Agricultural products, Aluminum oxide, Chromatography, Dichlorofluorescein, 2',7'-, Equipment, Hydroquinone, Microscopy, Pesticide residues, Silver nitrate.

1147-69

**NOTICE OF FILING OF PETITION REGARDING PESTICIDE CHEMICALS.**

J K Kirk  
*Fed Regist* 34(33):2329  
 18 Feb 1969 L1.451

Chromatography, Cottonseed, Insecticide residues, Methyl-2-(methylthio)propionaldehyde O-(methylcarbamoyl)oxip.

1148-69

**CAREFUL WITH CHEMICALS.**

P Mechling  
*Midwest Reg Turf Conf Proc* 1968 MEETING:23-24  
 04 Mar 1968 60.19 M58  
 Accident prevention, Accidents, Agricultural products, Pesticides, Residues.

1149-69

**BIPHENYL RESIDUES IN ORANGES; EFFECT OF BIPHENYL DOSAGE AND PAD PLACEMENT.**

S Norman G L Rygg D C Fouse  
*U S Agr Res Serv ARS* (51-26):8P  
 Aug 1968 A280.39 R31A  
 Biphenyl, Decay, Dosage, Fruit, Oranges, Packing, Residues, Storage injuries.

1150-69

**ON THE BEHAVIOR OF PESTICIDE RESIDUES DURING THE PREPARATION AND PROCESSING OF FOODS. 1ST. COMMUNICATION. THE BEHAVIOR OF RADIOACTIVE LABELED LINDANE DURING THE BAKING PROCESS. (GE)**

H Seidler M Hartig R Engst  
*Nahrung* 12(4):377-381 REF  
 1968 389.8 N142

Enzymes, Food processing, Lindane, Pesticide residues, Radiation, Yeasts. English and Russian summary.

1151-69

**ESTIMATION OF CHLORINATED PESTICIDE RESIDUES IN ANIMAL AND VEGETABLE OILS.**

J Singh J D Lanthier  
*Ass Offic Anal Chem* J 51(1):45-47 REF  
 Jan 1968 381 AS7

Aluminum oxide, Chlorinated hydrocarbons, Chromatography, DDT, Electron capture, Fats, Oils, Pesticide residues.

1152-69

**THE EFFECT OF LOW VOLUME APPLICATION OF DURSBAN ON NON-TARGET ORGANISMS.**

R K Washino K G Whitesell D J Womeldorf  
*Down Earth* 24(2,FALL):21-22  
 1968 381 D75

Aerial spraying, Aquatic insects, Chemical control (insects), Climate, Culicidae, Diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate, O,O f, Insecticide application, Insecticide residues, Insecticides, Rice, Wildlife.

## RESIDUES

1153-69

RESIDUES OF DURSBAN INSECTICIDE FOLLOWING MOSQUITO CONTROL APPLICATIONS.

W L Winterlin K Moilanen W E Burgoine

*Down Earth* 24(2, FALL):34-37

1968 381 D75

Chemical control (insects), Culicidae, Diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate, O,O,O-I, Insecticide residues, Rice, Water analysis.

## TOXICOLOGY

1154-69

TOXICOLOGICAL PROBLEMS OF DINITRO-ORTHOCRESOL WITH PARTICULAR CONSIDERATION OF ITS QUANTITATIVE DETECTION IN BIOLOGICAL MATERIAL. (GE)

H J Buchheim M Kuhnert

*Monatsh Vet* 23(7):246-249

01 Apr 1968 41.8 M742

Biology, Chemicals, Dinitrocresol, Dyes, Gastrointestinal system, Quantitative analysis, Ruminants, Sulfates, Swine, Toxicology, Zinc. English and Russian summaries.

1155-69

MORTALITY AMONG BOBWHITES CONFINED TO A HEPTACHLOR CONTAMINATED ENVIRONMENT.

J F Kreitzer J W Spann

*J Wildlife Manage* 32(4):874-878 REF

Oct 1968 410 J827

Heptachlor, Insecticides, Mortality, Quail, Toxicology.

1156-69

THE TOXICOLOGICAL EFFECT ON ANIMALS OF MIXTURES OF CHLOROPHOS AND DDT. (GE)

P D Lestschenko W I Svatkov

*Nahrung* 12(4):369-375

1968 389.8 N142

DDT, Hygiene, Parathion, Pesticide residues, Rats, Synergists, Toxicity, Trichlorfon. English and Russian summary. Translated from the Russian by U. Pesslits.

1157-69

THE TOXICOLOGICAL EFFECT ON ANIMALS OF MIXTURES OF THIOPHOS, AND CHLOROPHOS. (GE)

P D Lestschenko W I Svatkov

*Nahrung* 12(4):363-367

1968 389.8 N142

Hygiene, Insecticides, Parathion, Rats, Symptomatology, Toxicity, Trichlorfon. English and Russian summary. Translated from the Russian by U. Pesslits.

1158-69

STATE OF OUR KNOWLEDGE ON THE TOXIC ACTIVITY OF BACILLUS THURINGIENSIS ON VERTEBRATES. (FR)

D Martouret

*Phytat-phytopharm* 16(2):75-82 REF

Jun 1967 464.8 P564

Animal diseases, *Bacillus thuringiensis*, Human diseases, Toxicology, Vertebrates.

1159-69

WHAT ARE PESTICIDES.

*Safety Rev* 25(9):8-10

Sep 1968 153 SA9

Accident prevention, Chemical control (pests), Education, Food, Health, Labeling, Pesticide application, Pesticides, Research, Toxicology.

1160-69

DIETARY EFFICIENCY OF NATURAL FOODS FOR THE GROWTH AND DEVELOPMENT OF TRIBOLIUM CASTANEUM HBST. AND CORCYRA CEPHALONICA STAINT.

G K Punj

*Bull Grain Technol* 5(4):209-213 REF

## BIBLIOGRAPHY

Dec 1967 TS2120.B8

*Coryca cephalonica*, Diet, Food, Growth factors, Inhibitors, Insect morphology, Insect physiology, Temperature, Toxins, *Tribolium castaneum*.

1161-69

A CASE OF DIQUAT POISONING IN CATTLE.

P Thomas O F Amor

*Vet Rec* 83(26):674-676

28 Dec 1968 41.8 V641

Cattle, Containers, Diquat, Herbicides, Poisoning, Residue in a drum still fully toxic after 4 years and dilution with nearly 5 gallons of rain water.

1162-69

CYCAD HUSK FROM GUAM: ITS TOXICITY TO RATS.

M G Yang O Mickelsen

*Econ Bot* 22(2, APR-JUN):149-154

1968 450 EC7

*Cycas circinalis*, Poisonous plants, Rats, Seeds, Temperature, Toxicology.

## PLANT PHYSIOLOGY & BIOCHEMISTRY

1163-69

THE INTERACTION OF COUMARIN AND TEMPERATURE IN THE GERMINATION OF LETTUCE SEED.

A M M Berric

*Physiol Plant* 21(5):960-965 REF

20 Sep 1968 450 P564 (1)

Coumarin, Lettuce, Plant growth inhibitors, Plant physiology, Seed dormancy, Seed germination, Temperature.

1164-69

MOLYBDENUM IN SOILS AND ITS AVAILABILITY TO PLANTS. (POL)

E Gorlach

*Acta Agr Silvestria Ser Roln* 7(1):79-149 REF

1967 20.5 AC8

Liming, Molybdenum, Nitrates, Plant biochemistry, Plant nutrition, Plant nutritional deficiencies, Rape, Soil properties, Soils. English and Russian summaries.

1165-69

GIBBERELLIN-LIKE SUBSTANCES IN THE TRANSPIRATION STREAM OF APPLE AND PEAR TREES.

O P Jones H J Lacey

*J Expt Bot* 19(60):526-531 REF

Aug 1968 450 J824

Apples, Biological assay, Gibberellins, Pears, Plant transpiration, Sampling (statistics), Sap.

1166-69

THE TOXICITY OF BIURET TO PLANTS AS DEPENDING ON SOIL CONDITIONS. (POL)

H Jurkowska

*Acta Agr Silvestria Ser Roln* 7(1):3-21

1967 20.5 AC8

Biuret, Crop yields, Dosage, Oats, Plant physiology, Rape, Soil properties, Soils, Toxicology. English and Russian summaries.

1167-69

ABSORPTION, TRANSLOCATION AND METABOLISM OF 3-AMINO-1,2,4-TRIAZOLE IN PINUS PONDEROSA AND ABIES CONCOLOR.

K Lund-Hoib D E Bayer

*Physiol Plant* 21(1):196-212 REF

10 Feb 1968 450 P564 (1)

*Abies concolor*, Absorption, Amitrole, Chlorosis, Chromatography, Electrophoresis, *Pinus ponderosa*, Plant metabolism, Plant translocation.

1168-69

EFFECT OF URACIL AND 5-NITROURACIL ON GROWTH AND FLOWERING OF TOMATO.

S N Mathur R A Sharma

*Physiol Plant* 21(5):911-917 REF

20 Sep 1968 450 P564 (1)

Flowers, Plant physiology, Plant regulators, Pyrimidines, Tomatoes, Uracil.

1169-69

ON THE EFFECT OF ISOPROPYL-N-3-CHLOROPHENYL-CARBAMATE (CIPC) ON THE SUGAR CONTENT OF POTATO TUBERS. (GE)

A Moll

*Nahrung* 12(4):383-389 REF

1968 389.8 N142

Cold storage, Growth factors, Isopropyl N-(3-chlorophenyl) carbamate, Plant growth inhibitors, Plant respiration, Potatoes, Sucrose, Temperature, Tubers. English and Russian summary.

1170-69

LABORATORY EXAMINATION OF ORGANIC FUNGICIDES AGAINST ZOOPATHOGENIC FUNGI IN SOIL.

A L Morchart H W Larsh

*Appl Microbiol* 15(5):1248-1251 REF

Sep 1967 448.3 AP5

Alleschia boydii, Biochemistry, Chemical control (plant diseases), *Cryptococcus neoformans*, Fungicides, *Histoplasma capsulatum*, Organic compounds, Research, Soil fungi, *Sporotrichum schenckii*.

1171-69

VOLATILE GROWTH INHIBITORS PRODUCED BY SALVIA LEUCOPHYLLA: EFFECT ON SEEDLING GROWTH AND RESPIRATION.

W H Muller P Lorber B Haley

*Torrey Bot Club Bull* 95(5, SEP-OCT):415-422

1968 451 T63B

Plant growth inhibitors, Plant physiology, Plant respiration, *Salvia leucophylla*, Volatile substances.

1172-69

EFFECT OF GIBBERELLINE ACID AND PHOSFON ON THE CRITICAL DARK PERIOD REQUIREMENT FOR FLOWERING OF IMPATIENS BALSAMINA CV. ROSE.

K K Nanda H N Krishnamoorthy K Lal

*Physiol Plant* 21(5):1037-1044 REF

20 Sep 1968 450 P564 (1)

Flowers, Gibberellic acid, *Impatiens balsamina*, Phosfon, Photoperiodism, Plant growth regulator, Plant physiology.

1173-69

THE EFFECTS OF GIBBERELLIN ON THE METABOLISM OF ETHANOL-SOLUBLE CONSTITUENTS IN THE COTYLEDONS OF HAZEL SEEDS (*CORYLUS AVELLANA* L.).

N J Pinfield

*J Expt Bot* 19(60):452-459

Aug 1968 450 J8224

Acetates, Biochemistry, Carbon isotopes, *Corylus avellana*, Gibberellins, Plant metabolism, Radioactive tracers, Seed germination, Seed treatment.

1174-69

STUDIES ON THE MECHANISM OF GIBBERELLIN-INDUCED SEEDLESSNESS OF DELAWARE GRAPES. II. DEVELOPMENT OF OVULES AND POLLEN AS AFFECTED BY PRE-BLOOM GIBBERELLIN TREATMENT.

A Suguri A Inaba

*Kyoto Univ Coll Agr Mem (SER 4,93):43-49*

Mar 1968 107.6 K994

Gibberellins, Grapes, Ovulation, Plant physiology, Plant respiration, Pollination, Seed germination, Seeds.

1175-69

RETARDATION OF FLOWERING BY AUXIN-GIBBERELLIN SPRAY IN CHRYSANTHEMUM MORIFOLIUM.

Y Tsukamoto N Kawashima T Tanaka

*Kyoto Univ Coll Agr Mem (SER 4,93):1-19* REF

Mar 1968 107.6 K994

*Chrysanthemum morifolium*, Gibberellins, Growth factors, Inhibitors, Plant propagation, Plant regulators, Spraying, Tables (data).

## BIBLIOGRAPHY

## INDUSTRY

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**1176-69**  
THE EFFECTS OF 1-NAPHTHYLACETIC ACID ON THE GROWTH OF EXCISED TOMATO ROOTS.  
G D Weston H E Street  
*J Expt Bot* 19(60):628-635 REF  
Aug 1968 450 J8224

Biochemistry, Culture media, Glucose, Naphthaleneacetic acid, 1-, Plant physiology, Plant regulators, Roots, Sucrose, Tomatoes.

**1177-69**  
GIBBERELLIN AND HULL CONTROLLED INHIBITION OF GERMINATION IN AEGILOPS KOTSCHYI BOISS.

J Wurzburger Y Leshem  
*Israel J Bot* 16(4):181-186 REF  
1967 450 I57  
Aegilops kotschy, Gibberellins, Plant regulators, Seed germination.

## CHEMISTRY

**1178-69**  
A NEW FUNGAL TETRAHYDROFURAN.

B F Burrows  
*Chem Commun* (12):597-598  
21 Jun 1967 382 C4223  
Butadienyl)-3-hydroxy-4-(1,3-pentadienyl)tetrahydrofuran, 2-e, Chemical reactions, Chromophores, Culture media, Fungicides, Infrared spectra, Metabolites.

**1179-69**  
PROPERTIES AND USES OF POISONOUS CHEMICALS. (JPRS 41,364) TRANSL. 16680.

M S Bykhovskaya et al.  
40 P.  
13 Jun 1967  
Arsenic, Chemicals, Chlorine, Insecticides, Organic compounds, Phosphorus, Poisoning. Translation from Metody Opredelejnyia Vrednykh Veshchestv v Vozdukhе:502-525, 1966. issued by CFSTI.

**1180-69**  
SIMPLE METHOD FOR DETERMINATION OF GLYCINE AND NIACIN IN DRUG MIXTURES.

K L Egli A Romano  
*Ass Offic Anal Chem* J 51(1):11-14  
Jan 1968 381 AS7  
Chemical reactions, Chromatography, Drugs, Formaldehyde, Glycine, Nicotinic acid, Nutrition, Vitamins, Volumetric analysis.

**1181-69**  
COLLABORATIVE STUDY OF A VERSATILE PROCEDURE FOR ASSAY OF AFLATOXINS IN PEANUT PRODUCTS, INCLUDING PREPARATORY SEPARATION AND CONFIRMATION OF IDENTITY.

R M Eppley L Stoloff A D Campbell  
*Ass Offic Anal Chem* J 51(1):67-73 REF  
Jan 1968 381 AS7  
Aflatoxin, Assay, Chromatography, Filters, Peanut butter, Peanut meal.

**1182-69**  
STUDIES OF THE USEABILITY OF ALUMINUM-MOXIDE FOR THE CLEANING OF FAT EXTRACTS FOR THE GAS-CHROMATOGRAPHIC ANALYSIS OF RESIDUES OF CHLORINATED INSECTICIDES. (GE)

E Gloske  
*Pflanzenschutzberichte* 36(8/10):143-155 REF  
Dec 1967 464.9 P48

Aluminum oxide, Chemistry, Chlorinated hydrocarbons, Chromatography, Fats, Insecticide residues, Tables (data). English summary. studies of 13 active substances.

**1183-69**  
POLAROGRAPHIC ANALYSIS OF S-TRIAZINE HERBICIDES.

M H B Hayes M Stacey J M Thompson

*Chem Indus* (28):1222-1223

15 Jul 1967 382 M31C  
Chemical reactions, Equipment, Herbicide residues, Polarography, Research, Triazine herbicides.

**1184-69**  
EXTRACTION AND ESTIMATION OF POLYCYCLIC AROMATIC HYDROCARBONS IN TOTAL DIET COMPOSITES.

J W Howard T Fazio R H White B A Klimeck  
*Ass Offic Anal Chem* J 51(1):122-129 REF  
Jan 1968 381 AS7

Aromatic hydrocarbons, Benzopyrene, Chromatography, Diet, Extraction, Fluoranthene, Food analysis, Pyrene, Spectroscopy.

**1185-69**  
THE FEASIBILITY OF MASS SPECTROMETRIC METHODS IN RESIDUE ANALYSIS. (GE)

J Jorg M Spitteler-Friedmann G Spitteler  
*Pflanzenschutzberichte* 36(8/10):157-165 REF  
Dec 1967 464.9 P48

DDT, Heterocyclic compounds, Pesticide residues, Propazine, Spectrometry. English summary.

**1186-69**  
THE CIRCULAR DICHROISM AND THE STEREOCHEMISTRY OF A NEW FUNGAL TETRAHYDROFURAN.

S F Mason G W Vane  
*Chem Commun* (12):598  
21 Jun 1967 382 C4223

Absorption spectra, Butadienyl)-3-hydroxy-4-(1,3-pentadienyl)tetrahydrofuran, 2-e, Chromophores, Fungicides, Metabolites, Stereochemistry.

**1187-69**  
CHEMICAL CHARACTERISTIC OF THE PRODUCTS OF DRUG DECOMPOSITION. I. POLAROGRAPHIC EXAMINATION OF THE PRODUCTS OF PAPAVERINE HYDROCHLORIDE DECOMPOSITION. (POL)

E Pawelczyk T Hermann  
*Chem Anal* 13(3):617-625 REF  
1968 385 C4233

Chemicals, Degradation, Drugs, Hydrochloric acid, Papaveraline, Polarography. Summary in English.

**1188-69**  
MICRO-ENCAPSULATION-A METHOD FOR INCREASING SPECIFICITY AND CONTROLLING PERSISTENCE OF PESTICIDES.

F T Phillips  
*Pans (pest Articles News Sum) Sect A Insect Contr* 14(3):407-410  
Aug 1968 423.92 G798

Biochemistry, Encapsulation, Pest control, Pesticide residues, Pesticides.

**1189-69**  
FIELD SCREENING OF NEW CHEMICALS FOR HERBICIDAL ACTIVITY, 1968.

R E Talbert R E Frans J E Orr  
*Ark Agr Exp Sta Memeogr Ser* (SER 169):17P  
Sep 1968 100 AR42M

Chemical control (weeds), Chemicals, Herbicides, Research, Tables (data).

**1190-69**  
EXPERIMENTS CONCERNING THE SENSITIVITY OF TRICHOGRAMMA (HYMENOPTERA, CHALCIDOIDEA) TO FUNGICIDES.

H Ulrich  
*Anz Schadlingskunde* 41(7):101-106  
Jul 1968 421 AN9

Chemicals, Fungicides, Orchidaceae, Research, Trichogramma. English summary

**1191-69**  
3,6,9,10-TETRAHALOGENPHENANTHRENE. A NEW CYCLARYLATION REACTION OF DDT DERIVATIVES. (GE)

C D Weis  
*Helv Chim Acta* 51(7):1572-1581 REF  
31 Oct 1968 385 H36

Chemistry, Cyclic compounds, DDT, Halogen compounds, Pesticides, Phenanthrenes. English summary.

**1192-69**

SPECIFICATIONS FOR PESTICIDES USED IN PUBLIC HEALTH.

300P GENEVA, SWITZERLAND, WORLD HEALTH ORGANIZATION

1967 RA1270.P4W6 1967  
Insect repellents, Insecticides, Methodology, Molluscicides, Pesticides, Public health, Rodenticides.

**1193-69**

STATISTICAL INVESTIGATIONS OF THE ACCURACY OF GAS-CHROMATOGRAPHIC RESIDUE ANALYSIS. (SOURCES OF ERROR OF THE GCSTANDARDS). (GE)

W Zislavsky  
*Pflanzenschutzberichte* 36(8/10):113-141 REF  
Dec 1967 464.9 P48

Chemistry, Chromatography, Pesticide residues, Statistical methods, Tables (data). English summary.

## ENGINEERING

**1194-69**

PRESSURISED SOIL FUMIGATION EQUIPMENT FOR CONTROL OF EELWORM.

C W Robartson  
*West Aust J Agr (SER 4)9(8):385-389*  
Aug 1968 23 W52J

Equipment, Pesticide application, Plant nematodes, Soil fumigation.

**1195-69**

RESEARCH NOTE NO.5: PACK SPRAYER FOR RESEARCH PLOTS.

H Seltmann H V Marshall  
*Tobacco* 165(5):27-29  
04 Aug 1967 286.89 T552  
Agricultural chemistry, Agricultural research, Carbon dioxide, Experiment stations, Pesticide application, Spraying equipment.

## INDUSTRY

**1196-69**

THE ORGANISATION OF THE AUSTRALIAN POULTRY INDUSTRY AND ITS INFLUENCE ON DISEASE.

P Gilchrist  
*Australian Vet J* 44(9):420-425  
Sep 1968 41.8 AU72  
Animal disease transmission, Eggs, Laryngotracheitis, Poultry diseases, Poultry industry, Poultry meat, Pullorum disease, Vaccines. Many poultry diseases are discussed.

**1197-69**

A CONTRIBUTION TO THE KNOWLEDGE OF HYGIENIC WORKING CONDITIONS IN THE TREATMENT OF SEED GRAIN. (GE)

E Kahl  
*Pflanzenschutzberichte* 35(4/5):49-57 REF  
Mar 1967 464.9 P48  
Grain, Hygiene, Industrial medicine, Mercury compounds, Organic compounds, Pesticides, Seed treatment. English summary.

## ECONOMICS

**1198-69**

OPPORTUNITIES FOR ESTABLISHING VISIBLE CROP AND LIVESTOCK PROTECTION PROGRAMS IN THE DEVELOPING COUNTRIES.

R H Wellman  
*Entomol Soc Amer Bull* 14(2):130-132  
Jun 1968 423.9 EN8  
Agricultural outlook, Crops, Livestock, Research.

**INDUSTRY**

1199-69

**EDUCATION**

1199-69

**SOME COST FIGURES FOR CONCENTRATE SPRAYS.**

J E Wright

*Amer Fruit Grower* 89(2):26,51

Feb 1969 80 G85

Agricultural economics, Agricultural labor, Agricultural products, Manufacturing costs, Prices, Publicity, Spraying.

**BIBLIOGRAPHY****REGULATIONS**

1200-69

**REFLECTIONS ON REGULATIONS-CERTAIN ASPECTS IN THE OFFICIAL CONTROL OF PESTICIDES IN VARIOUS COUNTRIES.**

J A R Bates

*Chem Indus* (40):1324-1332 REF

05 Oct 1968 382 M31C

Accident prevention, Agricultural regulation,

Chemical control (pests), Legislation, Pesticide residues, Pesticides.

1201-69

**PESTICIDES INDUSTRY: 15 YEARS OF PROGRESS.**

F R Mehta

*ISI (Indian Stand Inst) Bull* 20(5):168-170

May 1968 297.9 IN2

Agricultural regulation, Crop yields, Industry, Pesticides, Tables (data).

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